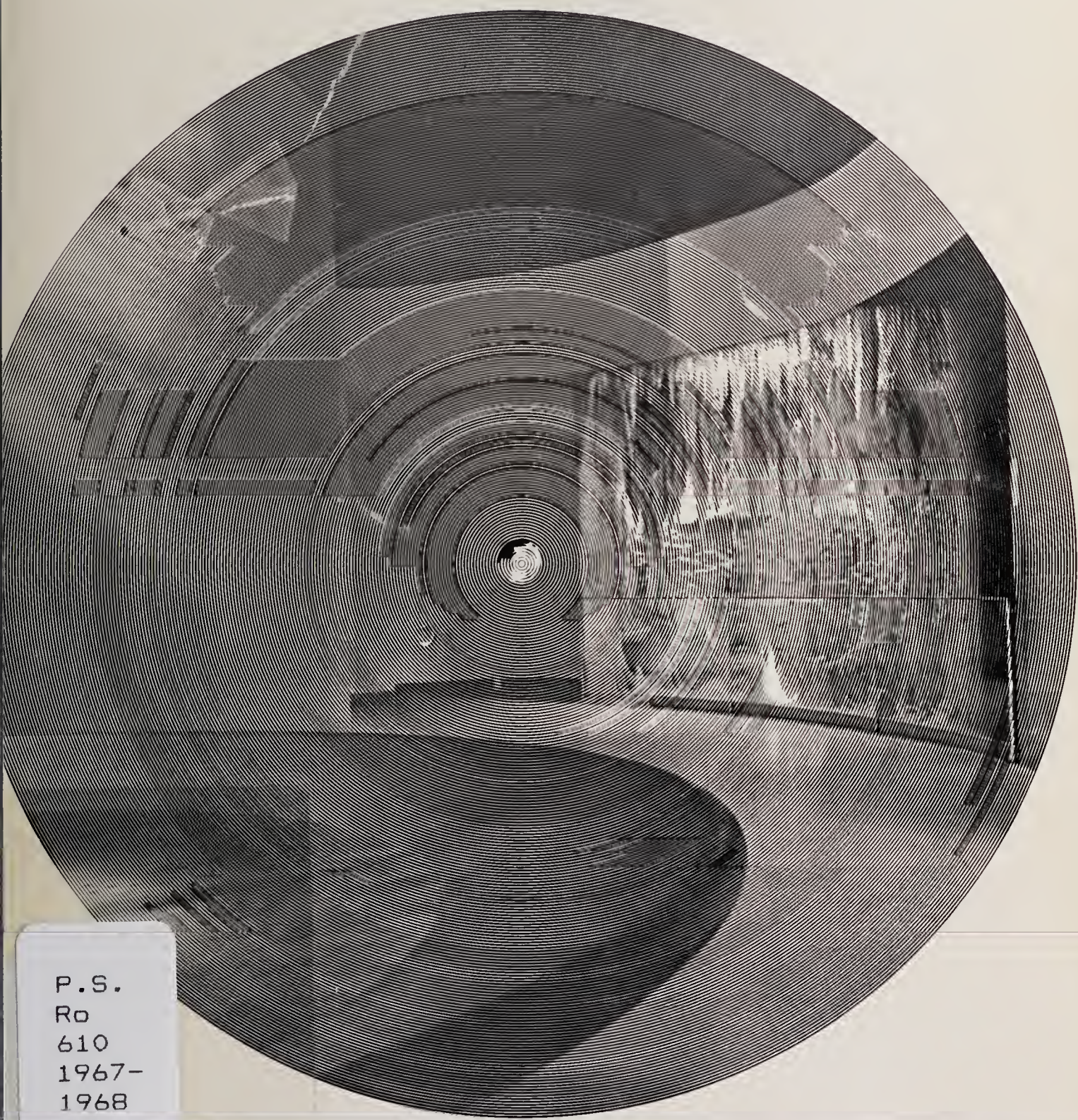



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Annual Report 18
July 1967-June 1968

ROYAL ONTARIO MUSEUM

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DIRECTOR'S REPORT

This has been a most stimulating year – not without its alarms and uncertainties, its frustrations and difficulties – but on the whole encouraging and progressive. All departments, academic and service, have co-operated to raise the tempo of the Museum's pulse. New galleries, such as the Gallery of Minerals, opened to widespread acclaim. The outside of the building underwent the first stage of its face-lift, a new 18th-century French room was installed, one large gallery in the Canadiana Department was completely reorganized, the Museum gained a new print room. Much of this was due not only to the initiative of the Departments concerned but also to the new Display General Department and the skilled body of carpenters and preparators who never failed to meet a deadline. New departmental and administrative offices were squeezed into already overcrowded quarters without encroaching on gallery space.

Publications have increased in quantity and quality and, without detracting in any way from the importance of the scholarly works, the appearance of the quarterly *Rotunda* was particularly gratifying. It has met with a success both at home and abroad which is in no way diminished by the fact that it is twenty years late in appearing. Thanks are due to the Laidlaw Foundation for its launching. Only inadequate funds impede the expansion of a programme of publications which is vital to the organization itself and to the Canadian reputation everywhere.

Centennial Year brought honours – the Centennial Medal – to Mr. James L. Baillie, Assistant Curator of Ornithology, and Dr. W. B. Scott, Curator of Ichthyology.

Membership has risen rapidly, which helps remedy the impression that the Museum was a restricted club. The Canada Council has for the first time contributed to the activities of the Museum, as opposed to the work of individual curators. The Board of Metro Toronto has helped with the reorganization of the outside of the building. To both the Museum is grateful.

Inevitably staff have left. In particular we wish Mr. Henry Trubner, Curator of the Far Eastern Department for ten years, good fortune in his new position in Seattle. Dr. H. Y. Shih has been appointed in his place. Mr. Harley Parker, Chief of Design, a man who did much for the Museum, has left. His place has been taken by Mr. John Anthony who has brought energy, imagination and efficiency to the Department. In Information Services Mrs. O. Koyama has taken charge of the Museum's growing output of publications. Mr. B. Kramer, who found to his professional horror that the Museum was using no less than 20 type faces, is engaged on a part-time basis in the rectification of the Museum's typographical image. Above all, we were sorry to lose Mr. Jack Brook, who served the Museum well as Secretary-Treasurer and who has now returned to the University administration. The Director owes him a personal note of thanks for the help he gave in introducing him to his position and for only revealing as much bad news at a time as he could digest! This important position has been filled by Mr. H. Harvey.

The building of the McLaughlin Planetarium, after a disheartening five-month strike, was completed at the end of June. This is a magnificent facility into which has been put the best of material and workmanship. It now remains to install the equipment for a fall opening. Already the Fund which Mr. McLaughlin gave to ensure its dynamic operation is proving invaluable. Dr. King

and his staff have already organized nine different presentations and many publications. Mr. Morris Gay has kindly designed uniforms for the attendants and the whole project gives promise of a resounding success. Would that the rest of the Museum were as well endowed!

It would be tedious to list the needs of this great cultural centre. Certainly a new restaurant to handle the ever-increasing attendance is essential. A number of galleries need renovation. Air conditioning and humidity control are vital if we are to preserve our treasures. Increasing vandalism, with the increased attendance, gives great cause for concern. These are all subsidiary to the need for a complete rethinking of the future needs and responsibilities of museums in the city. However, it would be an act of ingratitude not to recognize that we have been able to make what progress we have because of increased funds made available by the Provincial Government.

Above all, the year has seen the separation of the Museum from the University. The negotiations for this have greatly absorbed the energies and emotions of the Director during the past year. It would be remiss not to record our thanks to Mr. W. E. Brown of Blake, Cassels and Graydon who brought to the protracted discussions legal skill, patience and a willingness to try to understand the academic mind. The success of the divorce and the future happiness of the two parties will owe much to him. Equally the University and the Museum have settled the division of property on a reasonable basis which should not give rise to acrimony in the future.

Thus on June 30/July 1, 1968, the Royal Ontario Museum became once again independent of the University.

This is not the time or place to trace again the history of this great institution – the dream and achievement first of Charles T. Currelly and then of the innumerable dedicated men who followed him and of those very many generous members of the public who have supported the Museum with gifts of money and objects. They have created in Toronto outstanding collections comparable with and often surpassing those of European museums. The whole country has good reason to be proud of an incomparable institution which their vision, generosity and tenacity of spirit brought into being. It is fitting here to consider briefly the results, good and bad, of this 20-year period of University control.

Above all, integration with the University has given the museum standards and stature by making it an integral part of the rapidly expanding world of higher learning. The staff serving the Museum's 22 departments of arts and sciences has grown into one of the finest groups of skilled and devoted personnel of its kind in the world. They serve not only the public but also the international world of science in its broadest sense. This is as it should and must be. Without a broad base of research the Museum would become narrow and parochial and its highly trained personnel, attracted to other centres of learning, would disperse. As a result the Museum would become a second- or even third-rate organization. Such a prospect is unthinkable. The whole community would suffer and the Museum, which carried the flag of Canadian scholarship across the world, would wither. The loss would be Canada's. Close contact with the University has established our standards on a level with those in any great university and has maintained contact with lively young minds, engaged in research. It is important to remember that, just as private collectors are the life-blood of Museum

collections, so teaching and graduate research students in particular are the life-blood of the curatorial staff at every level.

Thus for 20 years the ROM has had the full academic weight of a great centre of learning behind it. The relationship has worked both ways. The University in its turn has increasingly come to appreciate the value and potential of the Museum's human and physical resources. Members of the Museum staff have contributed greatly to the teaching resources of the University. University teachers are constantly and increasingly using the collections. In return, the University strengthened the Museum's Board with men who realize the proper functions of a museum and what running it entails. They have been conscious of the need to protect and encourage its staff in its diverse interests. In the larger field of research the Museum has not only initiated many research projects, which it alone in Canada has the resources to do, but has also shared in some of the research projects of the Canada Council and the National Research Council organized through colleagues within the University. A system of cross-appointments with university departments has worked well and developed most promisingly. Both the Minister of Education and the President of the University have expressed their conviction that such academic relationships should be maintained and strengthened.

In this respect it is safe to say in passing that few people outside the Museum realize its international commitments. ROM archaeologists, who have contributed far more in this field than anybody else in Canada, dig in many parts of the world. Their work is a credit to Canadian scholarship and has served the nation's international relations. Our ornithologists and entomologists span the continent and beyond in their research, the Department of Ichthyology serves the whole of Canada with its invaluable studies on fish. Our mammalogists travel across the world in their search for animals to instruct the public and to serve the interests of research. The art departments constantly pursue a policy of improving collections. Here the need is particularly great, for they must not be deprived of opportunities which will never return. To do so would impoverish future generations, perhaps irreparably. What may seem expensive today will almost certainly double in price within ten years. The Canadiana Department has perhaps the finest collection of Canadian art in any institution. The Department of Ethnology with its material from Canada, Africa, and Central America is immensely rich – though at present hopelessly housed. In many areas the Museum is either unique in Canada or among the finest existing. And yet its problems have grown to be legion.

At times, it must be admitted with gratitude, the University has come to the financial aid of a hard-pressed organization. Had such help not been granted, irreparable damage might well have ensued. Again, the Museum has come to rely on the University for many other forms of assistance. Both the School of Graduate Studies and the Research Board have encouraged its academic endeavours. The University's staff of administrators and technical experts in many non-academic fields, notably, for example, in the Department of Physical Plant, has always been most helpful. To replace them will be difficult and costly. It would be ungrateful not to acknowledge the unfailing interest and co-operation of the University of Toronto Press which has always striven to meet Museum deadlines and has given its many publications a high technical and artistic standard.

Finally the Museum owes to University staff and departments much dedicated interest in its activities. Indeed, considerable increase in the Museum collections has resulted through the resources and influence of the University.

Yet the Museum has also in some ways suffered from its association with the University. Perhaps this was inevitable. Its identity to some degree was submersed. During a period of intensive growth, forced on it by unprecedented national needs, the University in the post-war years has not always been able to press Museum needs with sufficient force. For example, until last year the Museum, like other University divisions, was not allowed to plead its own cause before the bodies which recommend its funds – even though a special case could easily have been made for it. Again, the Museum was not allowed to appeal directly to the public for funds – another source of resentment both from the Museum side and from some devoted members of the public who were unwilling to give to the Museum in the mistaken conviction that the University would use such gifts for its own purposes. As a relative newcomer, it surprised me to learn how widely and fiercely this conviction was held. It proved difficult, sometimes impossible, to convince a number of otherwise genuine well-wishers that this did *not* in fact happen and that whatever they might be good enough to give to the Museum would, in fact, be used by the Museum.

On the academic side, until recently and in a fortunately rare number of instances, some University staff members, unfamiliar with or disinterested in the specialized work of the Museum on the one hand (since it did not relate directly to their teaching programmes) or unmindful of the Museum's responsibilities to the public on the other, have tended to under-value its contribution. But in recent years the achievements of the Museum staff in the international world of scholarship have completely removed any such suggestions.

It was common knowledge that during these years the condition of the Museum has not always been the happiest. Successive directors have striven to cure the disaffections. The Trustees, non-rotating appointments of the University Board of Governors have, one suspects, felt powerless, often frustrated and with some notable exceptions have grown disinterested. Many interested people in the Province have felt excluded from active participation in the work of the Board. Other universities in Ontario, feeling that the ROM was a University of Toronto preserve, have felt excluded from the benefits the unique Museum resources could bestow. If such disaffections were to have continued the whole community would have suffered. Thus in many respects the time had come for a change.

Now once more the Museum, in one of its functions a university in microcosm, is independent. The Hon. William G. Davis, a progressive Minister of Education and University Affairs, has given encouragement and recognition of our efforts. He has given his assurance that the Government is anxious that the new Board will encourage the Museum in its research as well as in its many other functions. The President of the University, Dr. Claude Bissell, a far-sighted scholar of wide interests, has always preserved a genuine and active interest in the Museum's welfare, and has publicly expressed his determination that, as far as the University of Toronto is concerned, the academic interests of the Museum will be maintained and strengthened.

Thus we must now look to the future with confidence rather than to the past with regret. The popularity of the Museum is running at a new high level. In the last year attendance increased by 50,000 to over three-quarters of a million. No less than 1 10,000 children received instruction. These are very large numbers indeed; to handle them properly, to provide the maximum benefit to the maximum number, required no small effort and organization, especially in an old, crowded building such as the Museum occupies. It gives cause for reflection that more people visit the ROM than probably any other single activity of its kind in Canada.

The Provincial Government fully recognizes the importance of this great Museum, without exaggeration one of Canada's most important cultural assets. Last year it came to its rescue by granting a generous measure of additional support in recognition of its very serious needs and its potential.

However, this is not enough. A museum of this importance must have financial resources to enable it to improve its collections at a time when good objects are becoming more scarce and more expensive by the month. From the public, which can now feel that it owns the Museum in the fullest sense of the word, we must look for an equally generous support to match that of the Provincial Government. The Government can reasonably expect that the public for its part will contribute generously to the purchases which will enrich the collections – *their* collections. With this in mind, about a year ago, the Museum started a Purchase Trust Fund of which the interest alone will be used to add to the Museum. At the time of writing this fund stood at \$105,000. Support from the public at a level of *at least* \$100,000 per annum is surely a most modest expectation for Canada's greatest Museum. In like measure, the Museum has every right to expect support for its academic activities from the Canada Council and the National Research Council. But it is fair to say that these bodies will not remain unimpressed by the degree of local support which the Museum can attract. Museums throughout the continent and Canada in particular are facing a period of rapid growth and interest and the ROM must maintain its premier position. That it does so is to a large degree up to the public.

The Planetarium will add another 100,000 or more young visitors and this alone will create tremendous problems. The Museum at present simply does not have the facilities to handle such crowds. The Metropolitan Toronto School Boards, in recognition of our services to children's education, have already increased their support and enabled the Museum to employ more teachers to handle the ever-growing numbers. They and some of the local school boards have been appreciative of our services. But this is simply not enough to deal with the increase which the Planetarium will add. Children in such numbers just cannot be turned loose in a museum. What should be an exciting introduction could easily be turned into an exhausting, frustrating experience and this the Museum wishes at all costs to avoid. The possibilities of the Museum in the area of children's education are limited only by the means and the space at its disposal.

There is no doubt that the Museum should serve the whole of the Province of Ontario. It is in many smaller towns that the need is particularly great. Equally as Canada's largest and most comprehensive museum, it should be engaged in

training staff for other museums throughout the country. This it can do perhaps better than anywhere else in Canada. The Museum Training Programme due to begin in July 1969 with, it is hoped, a degree granted by the University of Toronto should not only help other museums but also stimulate the ROM staff itself for, as in other disciplines, in the developing field of Museum Science nothing is more stimulating than contact with the alert minds of graduate students.

This leads to the major problem facing the Museum – that of space and expansion. The present building is old, ill-equipped, over-crowded, and totally inadequate for its needs. New and well-designed galleries have indeed been opened in the last year and much remains to be done in this direction. The whole problem of space and the needs of the future cannot be met without a major capital investment. This, it cannot be denied, will cost a considerable sum but it will be spread over a number of years and the result can be one of the finest museums in the world. Nobody can do such things on a shoe-string. It takes imagination, effort, direction and resources. The ROM has the material, the staff, the expertise, the energy and the will to create here an organization which will be the envy of the world. It is now up to the Government and the people of the Province to see that we make it so. I feel confident that they will.

**OFFICE OF THE
CHIEF
ARCHAEOLOGIST**

Dr. A. D. Tushingham, Chief Archaeologist, reports that archaeological field work in Ontario was sharply curtailed during the past year in order that pressing *housekeeping* problems might be attacked. The necessity of removing, at somewhat short notice, all material stored in the Borden building required a complete re-organization of the David Boyle room at the Museum. This, in turn, involved a preparation of systematic storage records for the extensive collections, which have accumulated since before the founding of the Museum, the weeding-out of useless material and the consolidation and registration of the remainder to make it available for scientific purposes. Under Dr. Kenyon's leadership and with the aid of Mrs. Caroline Parmenter and Mrs. Cecilia Finnigan, this important but arduous work has been virtually completed. The collaboration between Mr. R. C. Wheeler of the Minnesota Historical Society and Dr. Kenyon in underwater archaeology on the fur-trade route west of Lake Superior was continued in August, 1967 in the area between Kenora and Boundary Falls on the Winnipeg River. The most notable finds were a Northwest musket and a lead bale-seal. A 16 mm colour documentary on underwater archaeology was also completed and is scheduled for release in the autumn of 1968. Since May, archaeological survey work has been carried out at widely scattered spots throughout Southern Ontario, and a detailed reconnaissance of Methodist Provincial Park on Georgian Bay has been undertaken for the Ontario Department of Lands and Forests.

Mr. Selwyn Dewdney has continued his pursuit of Indian pictographs over the last year, his field work taking him eastward into Quebec and the Maritimes and westward into Alberta. His research led him, this past spring, to the USSR, where a Canada Council grant enabled him to consult the Russian experts in the field. We hope that this contact with fellow-scientists will eventually make it possible for him to visit some of the sites in the USSR to study at first hand techniques, motifs and physical problems.

The appointment of Miss Helen Sutermeister to the staff of Canadiana has led

to a vastly increased activity for that department in the field of Canadian historic archaeology. The excavation of pottery kilns, glass-houses, iron foundries and other industrial works of the nineteenth century in Ontario will add much precision to our knowledge about the provenance and date of many fine objects in our own and other collections. The excavation of potteries at Conestogo and Markham have already demonstrated the possibilities in this field. The Ontario Archaeological and Historic Sites Advisory Board is providing some assistance for this work.

Our collaboration with ACCWA (Archaeological Council for Canadian Waterways) over the past year, unfortunately, has been mostly only in the realm of exchange of information, for it has been beyond the Museum's ability to cope with the multitude of projects being carried out by the different underwater groups. However, they have themselves set up the Ontario Underwater Council Historical Committee which has provided training in the techniques of underwater archaeology and practice in putting these techniques to use. We rejoice in the responsibility and initiative shown by the divers and their parent organization and wish them every success.

At the time of writing Dr. David M. Pendergast is conducting the fifth season of the Museum's expedition to the Maya site of Altun Ha in British Honduras. The results continue to be important and exciting. The new evidence coming from this important ritual centre bears on all aspects of the life of the lowland Maya in this area over the last two thousand years. Public attention was focussed on our work by the broad newspaper, TV and radio coverage given to the discovery, this spring, of a very rich priestly tomb of the classic Maya period containing, among many other objects of importance, a large stone head of the sun-god Kinich Ahau. The expedition still enjoys the financial support of the Harvie Foundation and the Canada Council.

The summer of 1967 witnessed the first full season of the Museum expedition to Godin Tepe in southwestern Iran under the directorship of Dr. T. Cuyler Young, Jr. The major discovery was the columned audience hall, outbuildings and fortification wall of a Median citadel, probably the administrative centre of a local princeling of the 7th century B.C. Below this, the expedition has reconnoitred earlier settlements of the second millennium B.C. The Harvie Foundation has also provided generous assistance to our Iranian project and Yale University has collaborated with it.

The seventh and last season of excavations in Jerusalem, a joint enterprise of the British School of Archaeology and the ROM, proceeded as planned in the summer of 1967, in spite of the Israeli-Arab war. The concern of both Israeli and Jordanian authorities that such an important scientific project should continue overcame all other difficulties. We can now say that the main outline of the historical topography of the ancient city is clear, including the important fact that the city did not extend to the western hill until the Hellenistic period. It remains to publish the results – an onerous but rewarding task for the next two or three years. In 1967, the Museum's contribution was augmented by financial aid from the University of Toronto, McGill and Trent Universities and a private donor.

In addition to his responsibility in the Jerusalem project, during the past year the Chief Archaeologist was also involved in writing, with Dr. V. B. Meen, the

Chief Mineralogist, the book on the *Crown Jewels of Iran*. The results of this collaboration will see the light of day when, in the autumn of 1968, the University of Toronto Press publishes what promises to be one of the most beautiful books of the year.

At the time of writing, two new ventures appear to hold out much promise. One is in India, the other in the British Virgin Islands, but neither has yet been worked out in detail. The same holds true for our proposed excavation of the site of Taima in Saudi Arabia. While the government of that country has shown great interest in our proposal and welcomed the writer to Riyadh for discussions last October, no formal permit has yet been granted.

Members of the Museum and many others already know of our archaeological work through the medium of the *Archaeological Newsletter*, which continues to enjoy great popularity. The new Museum magazine, *Rotunda*, is also carrying articles on archaeology. But one of the triumphs of the past year has been the inroad made on the backlog of publication. Richard B. Johnston's *The Archaeology of the Serpent Mounds Site*, James E. Anderson's *The Serpent Mounds Site Physical Anthropology* and *The Cameron's Point Site* by Michael

*Jade head of
Kinich Ahau,
Mayan sun god,
excavated at
Altun Ha in
British Honduras*



W. Spence and J. Russell Harper, all appeared in our *Occasional Papers* series during the last year and complete our responsibility for the publication of our work in the Rice Lake area. Dr. Walter A. Kenyon's publication, *The Miller Site*, has recently been published as an Occasional Paper, and several other manuscripts are in the hands of the printers.

Dr. David M. Pendergast has been appointed Associate Archaeologist as of July 1, 1968. As director of our British Honduras project, he has been on our staff for nine months of the year; he will now be a full-time member and be able to devote himself not only to his field work but to the Museum's need for a resident specialist on Central America. During the past year, Mrs. Cecilia Finnigan was appointed Research Associate of the Museum; Mrs. Caroline Parmenter was brought to the staff to assist in Dr. Kenyon's *house-cleaning*, and Mr. Michael Lee was appointed technician to replace Mr. Claus Breede who has taken responsibility for all scientific illustration for the office.

The problem of space for offices, workrooms, display and storage is as critical for archaeology as for any other department in the Museum. But for full support in finding at least palliatives for this situation and for general interest and assistance to the whole archaeological programme, the writer wishes to thank the Director, the Secretary-Treasurer and other officers of the Museum.

CANADIANA DEPARTMENT

The Curator, Donald B. Webster, reports a very active year, in which total acquisitions from July, 1967, to May 30, 1968, included 133 gifts and 59 purchases. Most notable perhaps were four pieces of Quebec furniture, the gifts of the Laidlaw Foundation, a collection of some 80 pieces of 19th century Canadian pottery, the gift of Mrs. K. M. Graham, and a manuscript map of Quebec and environs during the siege of 1759, the gift of Mrs. F. St. George Spendlove.

Four students during the summer completed a re-cataloguing of the collection of prints, for which the Registration Department has produced upward of 3,000 new catalogue cards. An essential remounting and matting programme for watercolours has been carried on through the year by a part-time student technician.

Mrs. Mary Allodi's catalogue raisonné of the collection of watercolours and drawings is now ready for publication. Among other possibilities, discussions with a commercial publisher are proceeding.

Five special exhibitions have been held during the year: in the special exhibition hall, *Living Legacy, A Tribute to Sigmund Samuel*; in the Canadiana South Gallery, *Discovery and Mapping of Upper Canada, Arctic Exploration, William Berczy*, and *Cornelius Krieghoff*.

The North Gallery of the Canadiana building was closed for renovations on January 15, and during four months, with the expert help of the Carpenters and Preparators, has been completely restructured. The gallery now includes six room vignettes, for exhibition of 18th and 19th century furniture and decorative arts from different areas of Canada. Flanking and directly behind a large built-in Ontario doorway are three separate exhibition areas, for Canadian silver, Canadian glass, and archaeological material. The central portion of the gallery, containing the room vignettes, was opened to visitors on May 18; the three exhibition areas adjoining these will be opened individually as installations are completed.

Mr. Webster, cross-appointed to the School of Graduate Studies, taught a new graduate course in North American Decorative and Applied Arts. Also under the Fine Art Department, Mr. Webster, Mrs. Ignatieff, and Miss Sutermeister contributed lectures to the Canadiana section of the Fine Art 324 Course.

Mr. Webster, Mrs. Ignatieff, and Miss Sutermeister have lectured to numerous groups and organizations in Ontario, and made a number of television appearances. Mr. Webster took part in seminars at McMaster University, the Henry Ford Museum, and the Art Gallery, University of Rochester.

Outgoing exhibition loans have been relatively light in the post-Centennial period. One previous exhibition for the Ontario Art Institute has been continued; another of prints, *The Face of Early Canada*, has been organized.

The Department of Tourism and Information has nine items on a one-year renewable loan for the Museum of the Upper Lakes; other loans are in process for the Centennial Centre for Science and Technology, and for a new northern museum project at Moose Factory. Six pieces of silver were sent to the H. F. Dupont Wintherthur Museum for a special exhibition in March.

As part of an increasing concern with historic archaeology, we have during the year excavated four early manufacturing sites. These are mentioned in the report of the Chief Archaeologist. The report and analysis of last year's excavations at Brantford have been published as *Art and Archaeology Occasional Paper No. 13*.

On alternate Sunday afternoons during February and March, for the first time, the department presented a series of four concerts in the South Gallery. In spite of insoluble problems – inadequate seating capacity, and the closure of the North Gallery for renovations – attendance was at capacity, reviews were favourable, and an audience was attracted quite different from the usual gallery visitor. The series will be repeated in 1968–69.

The Department records with gratitude grants and benefactions for acquisitions to May 30 from the Laidlaw Foundation, Mrs. F. St. George Spendlove, the Atkinson Charitable Foundation, Molson's Brewery (Ontario) Ltd., and the ROM Members' Committee. A further grant is anticipated before June 30. A grant for research and field work has been made by Dominion Glass Company. Two further research grants are anticipated before June 30th. Mr. Webster has received a grant from the Canada Council for a project on Ontario-Germanic decorative arts.

Public requests continue to grow. Objects for identification, phone calls, letters of inquiry, and individual researchers now put demands on staff time approaching an average of one person-day per day. During the year approximately 100 items have been brought in for identification, and some 300 letter requests have been answered. Individual appearances for information, and particularly phone calls, are extremely heavy.

Total attendance, including school groups, for the Canadiana building was 16,356 from July 1, 1967 through April 30, 1968. This is a decrease of 6,358 visitors from last year, reflecting directly the necessary cancellation of all school tours during the closure of the North Gallery for renovation from January 15 to May 18. During this period there has also been a noticeable decrease in individual visitors, one of the penalties of inhabiting a separate building with only one

small gallery open. There is no doubt that the public and department would gain much from being in close physical contact with the main body of the Museum.

CONSERVATION DEPARTMENT

Mr. B. Leech, Assistant Curator-in-Charge, and the department staff of six have had an extremely busy year both in research and practical conservation.

In research, the use of X-radiographic facilities has been extended by the acquisition of a set from Vertebrate Palaeontology. In association with Mr. Bagnato of Photo Importing Agencies Ltd. (Agfa-Gevaert) six mummies from the Egyptian collection have been successfully radiographed. Further work is to be carried out to determine more fully the nature of inclusions seen on the radiographs. A method for determining water marks on our print collections is being developed. In co-operation with the Mineralogy Department the X-ray fluorescent spectrometer has been used for qualitative analysis on samples taken from a number of different objects. At present, semi-quantitative analysis of glazes from Canadiana potsherds is being attempted.

In the galleries regular records of relative humidity and temperature in the Exhibition Hall have again been obtained. An override control, to lower the humidity in the Hall as the outside temperature falls, has been installed. This

*Modern technology:
an Egyptian
mummy is X-rayed*



device will prevent ice damage to the walls of the hall but the resultant drop in humidity is generally contrary to the needs of the objects exhibited. Modifications to the Hall or the system are being considered.

Records obtained in other areas from time to time will be useful when considering comprehensive schemes for air-conditioning the galleries.

It is cause for concern that the European galleries which are specially vulnerable to vandalism and accidents have suffered most. Damage by vandalism is estimated to be in excess of \$4,000 (excluding cost of repairs). In the Far Eastern galleries only minor losses have been sustained, yet the breakage of the Fu Dog (accident) alone necessitated two man-weeks of work to repair.

Clearly a review of our security measures is indicated.

Mr. Leech, in charge of the Department, contributed to the series of lectures to secondary school students on the work of the various departments with a talk on *The Museum Object, its Care and Conservation*.

Departmental reconstruction has continued. Room 56 has been fitted with facilities for the treatment of paper, the darkroom fitted with an extraction system and the whole room redecorated. Except for additional lighting equipment still to be acquired, room 56 can now accommodate the treatment of paper and paintings, the taking of X-radiographs and a limited amount of micro-chemical analysis. A drill press and grinding/buffing stand have been added to room 55 and, with the provision of new work-benches, the reconstruction will be complete.

All departments call on conservation services and examinations have been made on 49 objects for eight departments using our own facilities and the facilities of the X-ray units in the Mineralogy department.

Condition reports have been made upon 1,888 objects, which is twice the number in 1966-67.

At least 208 objects have passed through the department for repairs, restoration or conservation during the current fiscal year. This is a smaller number than 1966-67 which can be explained by the extra time devoted to condition reporting, the time involved in such items as remounting the large mosaic for the Greek and Roman Department and the replication of jade from British Honduras and the Beardmore finds.

Calls from the public for advice and assistance continue to grow and 25 queries were answered by letter as well as 100 queries by phone and personal contact.

EGYPTIAN DEPARTMENT

Miss Winifred Needler, Curator, reports that little can be done to improve the general shabbiness of the Egyptian galleries until they receive the benefit of complete and costly re-installation. However, they are continually being improved for better enjoyment and information of the interested visitor. This year about one hundred freshly-typed explanatory labels, many with new or revised copy, have been provided and minor re-arrangements of the exhibits have been made for further interpretation of ancient life. Some of these have drawn upon storage material displayed for the first time. An important visual improvement has been the completion of the lighting of the wall cases in all the galleries. Spotlights should now replace the ceiling lights for the rest of the exhibits.

In the course of a general review of the department's holdings, the Dier el-

Bahari reliefs were restudied as part of a continuing attempt to fit them into the decorative scheme of the Neb-hepet-Re temple.

All study material has been moved and re-organized into new cabinets which the department shares with the Asian departments. Although much of the planned storage space remains to be completed, as a result of the review of study material much valueless and repetitive pottery has been disposed of, and important material has been made accessible for the first time. This work has emphasized the inadequacy of the storage space.

In co-operation with the Registration Department, the transfer of information from the old "Yellow Books" catalogue to the card catalogue, begun last year, has almost been completed. Stencils for more than two thousand card entries were prepared by the Egyptian Department. This has involved detailed research, rearrangement and sometimes revision of entries, a major undertaking. New cataloguing was mainly confined to a few newly studied items in storage.

Numerous accessions have been made to the collections of slides, photographs, clippings, index files and other aids to research and quick reference. Mrs. R. R. Hart, the volunteer of last year, completed her valuable subject index of off-prints and Mrs. W. S. Leach, the present volunteer, continued the useful work of indexing published material.

*Bernard Leech,
Peter C. Swann, and
Winifred Needler
examine rare and
fragile Egyptian
wall painting*



The public has increased its requests for information on all aspects and periods of Egypt and for examination of objects. The Centennial Centre of Science and Technology, publishers, advertisers, the broadcasting companies and, of course, teachers and students constantly request photographs and information. Among the requests from non-Egyptologists it has been a special pleasure to co-operate with colleagues in the Museum itself, for example by illustrations and other information for the McLaughlin Planetarium, by providing specimens for historical display in the new Mineralogy Gallery, and by participating in the Education Department's series of talks for the Canadian National Institute for the Blind.

A sale of surplus archaeological material was negotiated with the University of Melbourne through Professor John Bowman of that university's Department of Middle Eastern Studies. This sale served a triple purpose. It contributed to friendly international relations, lightened our storage problem, and raised \$500 towards the purchase of the Egyptian wall-painting.

Thanks to Mr. Leech and the expanding facilities of the Conservation Department two important conservation projects have at last been undertaken. The first is the systematic X-raying of the mummies, carried out in co-operation with Agfa-Gevaert Photographic Products. The second is the unrolling and piecing together of the Egyptian papyrus manuscripts. Both projects are still in progress and will require long study, it is hoped with the collaboration of specialists in other fields.

The only accession of note during the year is the long-term loan of a fragmentary Egyptian composite bow from the Metropolitan Museum of Art. Few such bows have survived and this is a most desirable addition to the department's exceptionally fine collection of ancient Egyptian weapons.

Before the end of the year the department hopes to be able to announce that the Museum has acquired the remarkably fine example of Egyptian wall-painting mentioned in last year's report. The Museum has an option on the painting until the end of June. Of its total cost of \$25,000 more than \$5,000 is still needed at the time of writing. In addition to the many members of the staff who have contributed help and advice in the Museum's efforts to raise money for the painting, the fine support of the Members' Committee must be mentioned, particularly that of Mrs. R. R. Hart, who was appointed by the Committee as special liaison worker for this fund-raising project.

The Museum contributed \$1,000 to the excavations of the Egypt Exploration Society at Tell el-Fara'in (ancient Buto) in the Egyptian Delta, under the field direction of Dr. M. V. Seton-Williams. The transfer of financial support from Professor Emery's excavations at Saqqara does not indicate any loss of material returns due from two previous contributions. The material is safe in England though not yet released by the excavators. Support was transferred because of uncertainty as to whether Professor Emery would be able to return this year and the conviction that greater need for our support existed at Tell el-Fara'in, where important work is being done and where a colleague in Near Eastern Studies at Toronto, Professor D. B. Redford, is participating.

The Curator read a paper entitled 'A Rock-drawing on Gebel Sheikh Suliman (near Wadi Halfa)' at the 28th International Congress of Orientalists at the University of Michigan in August. The paper has subsequently been prepared

for final publication. She delivered a lecture on ancient Egyptian textiles, one of a series of public lectures on textiles at the Ontario College of Art, on October 17.

Along with the above full-time programme of museum work, the Curator, in accordance with her cross-appointment as Associate Professor in the Department of Near Eastern Studies of the University of Toronto, conducted a seminar in Old Kingdom art and archaeology involving two hours a week through the fall and winter term.

ETHNOLOGY DEPARTMENT

During this past year, Dr. E. S. Rogers, Curator, reports that the staff was strengthened by the addition of Dr. Helmuth Fuchs, Associate Curator, as of September 1, 1967, Dr. Garth Taylor, Assistant Curator as of May 7, 1968, and Dr. Mary Black, Research Associate.

Some decoration and reorganization of the galleries was carried out but most of the activity was behind the scenes.

Mrs. Wood continued to supervise the Ethnology collections. No less than 10,000 specimens were organized and properly stored, and the appropriate cards were made out and filed. In addition, a number of specimens were catalogued. Work on record photography continued. The public continues to make more and more use of the Department for identification, information and loans. This is a welcome though time-consuming duty.

The Department was fortunate in obtaining a student grant from the Wenner-Gren Foundation (one of ten awarded in North America) to hire one undergraduate student in Ethnology for the summer of 1967. She worked under the guidance of Mrs. Wood.

Two graduate students from the Department of Anthropology being trained in Mexican Archaeology worked through the winter on the Department's holdings of Mexican archaeological material. A preliminary report has been submitted to the Department.

Reproductions of six Paul Kane paintings were published by the Commonwealth Advertising Company Limited, Clarkson, Ontario and are being sold at the Sales Desk.

Mr. John Hellson, Curator of Ethnology, Provincial Museum and Archives of Alberta, Edmonton, Alberta, was brought at our expense to examine and identify the Plains Indian material. As a specialist in this area he has contributed much information regarding the Department's holdings. A report will be forwarded in the near future.

Loans were made to 19 museums, universities, schools, libraries and special exhibitions.

The Department received 50 gifts, notably a camel saddle (Tuareg tribe, Sahara, Africa) from Mr. V. A. Richter and a chief's kente cloth from Ghana, West Sahara, Africa donated by Mrs. F. C. Carter. The department made 188 purchases. Notable among them were a collection of material from the Kickapoo Indians of Mexico from Mr. H. B. Roloff and a collection of Guajiro material from Venezuela and Colombia which was collected during a field expedition by the Department.

The Department has continued to co-operate with the National Film Board in Montreal and in conjunction with them has prepared a film strip entitled 'The

Canadian Indian: an Introduction.' This is the fourth in the series, and work has started on the fifth.

Many distinguished visitors came to the department during the year and a full programme of talks was carried out, including 'The Indians of Canada,' 'Primitive Methods of Weaving,' 'The Indians of Ontario' and 'Current Research and Studies on the Indian Community.'

The Department is often called on to participate in television presentations and collaborated in 'Tribal Customs Around the World,' 'Missionaries,' 'Head Hunting and Cannibalism,' and as consultant in 'Lonely Legacy.'

It contributed to the university's teaching programme with course #1011 Culture, Ecology and Technology, two hours per week, October–April (four students).

The Curator served on a number of boards and committees including the Committee for Arctic and Subarctic Research, University of Toronto; the Archaeological and Historic Sites Board; the Committee for Graduate Students in Anthropology (Chairman); the Continuing Committee for the Second National Northern Research Conference; and acted as consultant for the Ontario Department of Lands and Forests; the Department of Social and Family Services; the National Museum of Canada (Eastern Subarctic Gallery); and the National Film Board.

Dr. Helmuth Fuchs, Associate Curator, during the months of September and October 1967 collected Guajiro material from Venezuela and Colombia. He is now doing field work on the Guajiro legal norms in transition, a project sponsored by the Canada Council. The Curator continued his Parry Island Project, the last year of this particular project sponsored by the National Museum of Canada, Ottawa. Dr. Garth Taylor, Assistant Curator, is doing research at Fort Chimo on the ethnographic history of the Eskimos of Ungava Bay, and Dr. Joan Vastokas, Research Associate, is studying the Northwest Coast Indian material from an art historian's point of view. Dr. Mary Black, Research Associate, will commence a two-year ethno-biological study of the Round Lake Ojibwa as of September 1968.

Dr. Edward S. Rogers, Curator, has in the press *The Mistassini Cree Hunters* – articles contained in a volume of 15 contributors being published by Holt, Rinehart and Winston; *Ethno-History of the Mistassini Indians*, University of Laval; *Band Organization among the Indians of the Eastern Subarctic*, National Museum of Canada; *Natural Environment – Social Organization – Witchcraft. Cree versus Ojibwa – A Test Case*, National Museum of Canada, and *Co-operation or Competition among the Ojibwa*, University of Wisconsin Press. Dr. Garth Taylor, Assistant Curator, wrote *The Labrador Eskimos in 1765: Report of an early visit by four Moravian missionaries*. He submitted for publication to the Royal Ontario Museum and has in press *William Turner's journeys to the caribou country with the Labrador Eskimos in 1780*.

The Department looks forward to the time when it will be able to display its incomparable collections in a manner befitting their importance.

EUROPEAN DEPARTMENT

Mr. H. Hickl-Szabo, the Acting Curator, went to Europe in September and researched the Eaton Romanesque capital which resulted in an article for *Rotunda*. He also did some preliminary work in Prague on the Brokoff sculp-

ture given us by Mrs. T. Bata. With Miss Ferguson he collaborated on the *Guide* to the Armour Gallery, and she published an article on Chinese Chippendale in *The Canadian Collector*. She visited Corning to investigate the possibilities of our obtaining equipment for glass research important for the glass collection. Steps have since been taken to introduce new methods. Miss Ferguson visited Europe to study collections in London and Vienna. Miss Paikowsky carried out some preliminary research on the rings in the Lee Collection, a large amount of cataloguing of the later pottery and porcelain and research with positive results on the stained glass window presented by Mrs. J. D. Eaton. Mr. Cselenyi has prepared an article on the Brokoff sculpture, as well as short articles on other pieces of European sculpture recently obtained. He is working through the large and valuable collection of musical instruments, which have never been properly catalogued.

Miss Paikowsky gave a lecture on Michelangelo to a Jewish women's club. Miss Ferguson and the Acting Curator gave two thirds of a course of lectures (two a week) to third year University students in the Department of Fine Art, the other third being given by the Departments of Textiles and Canadiana.

The installation of a new English period room, generously presented and installed by the Weston Foundation, entailed rearrangement in the English galleries. Miss Paikowsky made new displays of the English porcelain, and renewed labels in many parts of the galleries. The Department also arranged a

Salon with carved light oak panelling, dated about 1735, from a house in the rue Elzevir, Paris





*Bust of
St. John the Baptist,
by Brokoff, the gift
of Mrs. T. Bata*

small area as part of a mediaeval *Hall* beside the Elizabethan room, with storage above. At the end of the year the new French panelling was installed as a period room for the Museum's excellent collection of French furniture.

A small exhibition of prints was mounted in the third floor rotunda early in May by Miss Paikowsky and Miss Lochnan who wrote a short article on print-making for use as a guide.

The large and important exhibition, *Prized Possessions from Private Homes*, planned for October, 1968, has claimed much time and effort since the summer – visiting lenders, selecting, listening and photographing material. After collating the material in each category, a process of weeding of duplicates in favour of the finest example was carried out before the work of cataloguing could begin.

Important accessions include a half-length figure of Christ, linden wood, Bohemian, c. 1700; a pocket watch, silver, English, early 19th century, made for the Turkish market, gift of Mr. Charles Redpath; Madonna and Child with St.

John, pear wood, Dutch, second half 17th century; porcelain figures of St. John and Mary Magdalene, from a Crucifixion, Meissen, 1740–42, by Johann Gregor Kaendler; Virgin and Child, terracotta, Sicilian, signed Joseph Ferraro and dated 1623; four porcelain dancing couples, Sèvres, mid-18th century; Misericord, oak, English, 14th century; stained glass window, late 19th century, gift of Mrs. John David Eaton; Victorian sofa with walnut frame, gift of Mr. Patterson Farmer; furniture, porcelain and textiles for a library, gift of the Garfield Weston Foundation; pine-panelled library, 18th century, gift of the Garfield Weston Foundation; two Dutch wine glasses (18th century), a punch ladle, silver, English (18th century) and a housekeeper's spoon, Irish, early 19th century, gifts of Mr. Robert A. Laidlaw; oak sculpture, St. Ambrose and monks, Flemish, c. 1510, gift of Mrs. Percy Easser; oak panelling from a French 18th century room, purchased with the help of the Laidlaw Foundation and various friends of the Museum.

With the Board's permission the Department obtained a Permanent Loan of some very fine arms and armour from Mr. Roy Cole. (Some objects will go into the *Prized Possessions* show, and some will be mounted in the Armour Gallery.)

FAR EASTERN DEPARTMENT

The Far Eastern Department's activities during the past year have been largely divided among preparations for the important loan exhibition of Indian and Nepalese art from the Heeramanek collection, University and Museum teaching programmes, gallery work, travel and research. Mr. Trubner reports, in addition, that the Curatorial and Technical staff continued their year-round work of cataloguing and research on the Department's vast collections of East Asian art and archaeology, drawing upon new knowledge based on more recent scholarship, archaeological finds and publications. During the year, more and more of the objects in the permanent collection have been photographed as part of the Department's basic photographic reference file, while slides of the Department's major holdings have been added in increasing numbers, thus vastly improving the already extensive photographic and research facilities. Mrs. Murray Bell very kindly devoted a great deal of time during the year to the mounting and labelling of new photographs. Mr. Trubner's long-awaited *Illustrated Handbook on the Far Eastern Collections*, representing a selection of over a hundred of the most important and significant objects of Chinese, Japanese, Indian and Korean art and archaeology, has at last gone to press and will soon be published. The *Handbook* will be an important scholarly contribution and will be of great help in bringing the unique importance and great riches of the Far Eastern collection to the attention of scholars, students and the public. In addition Mrs. Stephen, the Department's Assistant Curator, is bringing to completion her important manuscript on *The Chariot in Shang China*, the result of many years of study and intensive research.

Preparations for the installation and setting up of the very large and highly significant exhibition of *The Arts of India and Nepal: the Nasli and Alice Heeramanek Collection* occupied most of the Curator's time and energy during the fall. The exhibition, numbering almost 300 items, included major examples of sculpture in stone as well as bronze, Buddhist, Hindu and Jain painting, examples of the decorative arts such as metal work, glass, and jewelry, and an important group of textiles. The exhibition was formally opened at a gala recep-

tion on the evening of January 22nd by His Excellency General J. N. Chaudhuri, High Commissioner for India, and met with great success, drawing a total of 12,729 in paid attendance during the six-week showing at the ROM.

Early in 1968 the Curator was invited to participate in the International Trade Pottery Seminar, held in Manila from March 16–24. The Symposium, jointly sponsored by the Freer Gallery of Art in Washington, D.C. and the Seattle Art Museum, as well as the UNESCO National Commission of the Philippines and the National Museum, Manila, was attended by the world's leading experts and scholars in the field of Far Eastern ceramics, coming from various parts of Asia, Europe and North America. Mr. Trubner was the sole participant representing Canada. The Symposium was specifically concerned with recent archaeological excavations in the Philippines, which have yielded large quantities of Chinese ceramics from about the 12th to 16th century, forming an important body of material which sheds new light and knowledge on the nature and extent of the Chinese porcelain trade. Following a week of formal discussions and the presentation of scholarly papers, as well as visits to some of the archaeological sites and local collections of ceramics, the visiting group of scholars proceeded to Taiwan. There the Symposium continued, with discussions centred around the former Imperial collection of Chinese porcelain now housed in the National Palace Museum, Taipei. Mr. Trubner subsequently travelled to Japan for further discussions on Chinese, Japanese and Korean ceramics, and for

*Dancing Shiva
from the collection
of Nasli and Alice
Heeramanek,
displayed in the
exhibition
The Arts of India
and Nepal*



meetings with museum officials, private collectors and art dealers. As a result of what he saw in Japan, he was able to secure for the Royal Ontario Museum a large and unusually fine carved red lacquer dish, an example of early Ming *guri* style lacquer, dating from c. 1500 A.D. One of the best pieces of its kind, it will greatly enhance the Museum's growing collection of Ming lacquer.

The recent Asia House exhibition, *The Art of the Korean Potter*, the first major exhibition of ancient Korean ceramics, will be shown at the Royal Ontario Museum from July 15 to August 30, 1968. The Curator is presently planning its installation, with the help of the other members of the Department's Curatorial staff, and in co-operation with the Museum's Chief Designer and Display Department.

Three special guest lectures were given in conjunction with the exhibition *The Arts of India and Nepal*. On January 25, Dr. Pratapaditya Pal, Keeper of Indian Art at the Museum of Fine Arts, Boston, gave an illustrated lecture on 'Vision and Illusion; An Inquiry into Tibetan Painting,' and on February 22, Professor Benjamin Rowland Jr., Gleason Professor of Fine Arts at Harvard University, presented an illustrated lecture on 'Masterpieces of Early Indian Sculpture.' Dr. Stella Kramrisch, Curator of Indian Art at the Philadelphia Museum, gave the third lecture in this special series on March 5th entitled 'Ritual Art in Tribe and Village India.'

Following his trip to Portugal in the summer of 1967, primarily for the purpose of visiting the Gulbenkian Museum and in order to confer with officials of the Gulbenkian Foundation in Lisbon, the Curator applied for a renewal of an earlier grant for assistance to the Far Eastern Department Library. Happily this request was favourably received by the Gulbenkian Foundation, and a new grant of \$5,000 (U.S.), to be made available over a three-year period, was made to the Library of the Far Eastern Department. This timely help will greatly assist the Department to acquire important books, slides, photographs and other necessary library needs. The first installment of \$2,000 (U.S.) was received in January, 1968.

Mr. Trubner gave a series of illustrated lectures on Indian and Nepalese art to the Members' Committee in preparation for the guided tours of *The Arts of India and Nepal* exhibition. In addition, he assisted the Members' Committee in various ways and edited the respective scripts used by them for their Ten-to-One Tours of the Chinese, Japanese and Indian galleries.

Mr. Trubner and Mrs. Stephen both took part in the very successful Museum extension course on Chinese Art given in the spring, each giving four evening lectures as part of this programme. The last two lectures in the course, on the art of the Ming and Ch'ing Dynasties, were given by the Director. The lectures were held in the Far Eastern galleries, to allow for discussion of objects in the collection after each formal lecture.

Mrs. Stephen lectured to the Women's Art Society of Montreal, at the Montreal Museum of Fine Arts, and Miss Dohrenwend gave a lecture to the Society for Oriental Studies in Toronto.

The entire curatorial staff held cross-appointments in the Department of East Asian Studies: Mr. Trubner as Associate Professor, Mrs. Stephen and Miss Dohrenwend as Assistant Professors. They jointly taught East Asian Studies 331/431, an Honour Course for third and fourth year students.

The most important accessions for 1967-68 were a Chinese tripod censer, Southern Sung Dynasty, a square box in three sections, late Ming Dynasty and a large dish, Ming Dynasty. In the field of Siamese ceramics was a globular jar, 15th-16th century and a deep saucer dish, 15th century, both from a most welcome larger gift of five examples of 15th century and later Siamese ceramics, donated by Mrs. George G. R. Harris.

Mr. Trubner resigned from his position as Curator of the Museum's Far Eastern Department and Associate Professor in the Department of East Asian Studies, effective June 30, 1968, in order to join the staff of the Seattle Art Museum, Seattle, Washington, where he will be Curator of Asiatic Art and also take charge of the Museum's Curatorial organization. During his ten years' tenure as Curator of the Department, there were many changes, including the complete re-organization of the Far Eastern galleries and storage facilities and the addition to the permanent collection of a number of important acquisitions of Chinese, Japanese, Indian and Korean Art, through purchases and as gifts. The Department's Curatorial and Technical staff expanded, and a notable increase was made in the Department's Library facilities, greatly aided by two special grants received from the Gulbenkian Foundation.

Miss Candace Coates has resigned from her position as Departmental Technician, effective June 30, 1968.

Mr. Hsu Chin-hsiung, a graduate student at National Taiwan University, has been invited by the Curator to join the Far Eastern Department staff in September in order to study, decipher and transliterate the inscriptions in the important Menzies Collection of Chinese Oracle Bones.

GREEK AND ROMAN DEPARTMENT

Throughout the year efforts have been made to *face-lift* the gallery exhibits, to the extent that this can be done on the very limited financial resources and technical help. Display cases have been gradually provided with top lighting and new background lining. Following study and reclassification a new display of the Roman *faience* ware from Egypt has been arranged by the Curator, Mrs. Leipen. Similarly, a collection of small Roman marbles (herms, small scale portraits, etc.) is being re-installed. With the collaboration and help of the Display Department a new exhibit area has been designed. Located in the present passage area between the Greek and Roman galleries, the exhibit is expected to be ready and installed for the occasion of the seventieth General Meeting of the Archaeological Institute of America, to be held in Toronto at Christmas 1968.

A simple but effective gallery setting has been constructed for a large Roman mosaic panel, a notable new acquisition. The mosaic, re-backed and reinforced by the Conservation Department, is now on display. An article on it, to appear shortly in an issue of *Rotunda*, has been written by Mrs. Leipen.

In addition to the Roman mosaic panel mentioned above, the Department acquired a group of 18 Greek vases from Apulia, and four Roman and Coptic bronzes from Egypt. The vases have been catalogued and put on display by Miss Harle. Our thanks go to the Phoenix of London Insurance Company for the generous gift of a Greek red-figure vase.

A new study-storage room has been added to the only one the Department has had until now. This room, so badly needed and unfortunately made possible only by cutting down on gallery space, will immediately have to double also as

an office for a new member of the curatorial staff, expected to join the Department later in 1968. The material is gradually being moved from its present highly unsatisfactory storage in the galleries (closed-in bottoms of cases), and from another overflowing room. Miss Harle has been responsible for organizing much of the move, and for the grouping of the material.

In July, 1967, Miss Harle attended a course on archaeology of Roman Britain given by the University of Durham at Corbridge (*Roman Corstopitum*). The Royal Ontario Museum's collection of Roman and post-Roman material from Britain is unique on this continent, and Miss Harle's special study in this

*Roman allegorical
mosaic, Tryphe and
Bios, acquired by
the Greek and
Roman Department*



field has been undertaken with a view to improving the display and the presentation of the Romano-British exhibit. On her stay and work at Corbridge Miss Harle reported in one of the issues of the ROM *Archaeological Newsletter* edited monthly by the Chief Archaeologist.

Mrs. Leipen gave the following addresses: 'Coptic Art and Textiles,' a seminar, Ontario College of Art, October 1967; 'The Parthenos of Phidias,' Toronto Society of the Archaeological Institute of America, February 1968; 'Roman Portrait Art, Illustrated by the ROM Collection,' North York Classics Teachers, November 1967; 'Greek Sculpture Gallery at the ROM,' to a class of Classical Archaeology Students, Laval University, April 1968. Cross-appointed in the University's Department of Fine Art, she also gave a series of lectures on Greek Terracottas during the spring term.

As in previous years the Department has gratefully received services and help rendered by Mrs. Nora McRae, a member of the Museum's Members' Committee. Mrs. McRae has very competently kept up-to-date the filing and cross-indexing of the ever-growing collection of off-prints, pamphlets, and clippings. The departmental secretary, Mrs. McCormick, has very efficiently carried a load of various duties, many of them of a technical nature and beyond the usual secretarial responsibilities.

DEPARTMENT OF PHILATELY

Once again the Museum is indebted to Mr. Douglas Patrick who has continued to arrange a series of exhibitions of postage stamps in the Lower Rotunda. This is a totally inadequate area for the purpose but, due to its proximity to the Coffee Shop, at least one which is heavily frequented! Mr. Patrick has not enjoyed the best of health recently and in thanking him for his devoted services we wish him a speedy recovery. The Museum is fortunate in having such volunteer help and looks forward to the time when the important and growing collection he supervises will be properly exhibited.

TEXTILE DEPARTMENT

During the four summer months of 1967, Mr. Burnham completed the programme covered by the Senior Fellowship granted to him by the Canada Council the previous year. Visiting Moscow, Leningrad and Berlin in June, he studied and recorded early examples of Canadian material from the Northwest Coast, and has been asked to prepare the official publication on the West Coast Blankets collected by Captain Cook, and now preserved in the Academy of Sciences, Leningrad. July was spent in fieldwork in Scotland searching for the origins of textile techniques found in Canada. This was continued in England in August. In addition to this, old Canadian Indian specimens were studied in various British museums. After attending the meetings of the British Association in Leeds, Mr. Burnham made a thorough study of the early Canadian material in the Collection du Dauphin in the Musée de l'Homme, Paris. After attending the official opening of the conservation laboratory of the Abegg-Stiftung in Switzerland, he attended the meetings of the Conseil du Direction of the Centre International des Textiles Anciens in Lyon. While there, he took part, by special invitation, in a three-day conference on the German version of the international textile vocabulary being prepared by CIETA.

The notes and information collected during this extended trip have now been

processed, and added to the record of Canadian textiles kept in the Department. Since then Mr. Burnham has continued his intensive research in this field, and during the spring of 1968 made a series of short field trips collecting material to fill gaps in the Museum's outstanding collection of early Canadian textiles.

Mrs. Brett and Mrs. Zoubek meanwhile organized the vast backlog of new acquisitions donated to the Museum during and after the *Modesty to Mod* exhibition. The exhibition stimulated an unprecedented influx of material, not only of Canadian origin but also from other parts of the world. This necessitated another re-organization of storage space and the new cabinets acquired during the year are now almost filled to capacity.

Another outcome of *Modesty to Mod* was a text, comprising sections of the catalogue, and a set of slides of dresses in the show which are being distributed to schools by the Department of Education and the Board of Education. Some of the slides were taken by the Board of Education and others are copies from ROM slides. The catalogue is being recommended as supplementary reading.

The University of Guelph has acquired, for teaching purposes, copies of 260 slides of costume worn in Canada, mostly views of dresses shown in *Modesty to Mod*.

The Fashion Group Inc. of Toronto have prepared a publication on designers (other than Canadian) represented in the ROM collections. Members have written biographical notes and Mrs. Brett wrote descriptions of all the designer garments in the collection and selected the illustrations and captions. The manuscript is now almost complete, and only awaits permission to publish 35 illustrations, most of which are drawn from *Vogue* and *Harper's Bazaar*.

Throughout the year costume and costume accessories shown in *Modesty to Mod*, as well as important recent acquisitions and a large number of Canadian textiles, were photographed. Photography in this department entails much time-consuming preparation – pressing, mounting and supervision by a curator during the photography sessions.

Mrs. Jarvie and Mrs. Zuppinger have both been kept busy with conservation. Both could be employed full time at this task.

Mrs. Priverts, as a break from typing, has made translations from learned journals in Russian and German ('Outer clothing of peoples of Siberia' by M. G. Levin and L. P. Potapov, Academy of Sciences, USSR, – conclusion, 49 typewritten pages; 17 pages on the collection in the Hermitage of articles collected by Captain Cook, and a couple of shorter translations from German.)

Mrs. Burnham joined the Department part-time to do weaving drafts and finished drawings of Canadian textiles in connection with Mr. Burnham's researches and for his publication on the subject.

Mrs. Brett received a Canada Council grant to spend nine days in London editing the forthcoming catalogue of *Indian Chintzes in the Victoria and Albert Museum and the Royal Ontario Museum* with Mr. Irvin, Keeper of the Indian Section of the V. and A. The typescript is now in the hands of Her Majesty's Stationery Office.

Mrs. Jarvie spent five days in New York studying the lace collections at the Metropolitan Museum in the Cooper Union Museum in connection with the re-

cataloguing of the lace collection of the ROM. She also saw storage, cataloguing and conservation facilities and returned satisfied that the methods used in this department are in most instances more efficient.

A loan exhibition was prepared for display at the East York Public Library.

Recent costume acquisitions were put on display in the costume gallery in January but some *Modesty to Mod* material was left on display to promote sales of the catalogue.

A display of Canadian weaving and quilts from various parts of the country was installed in the Ontario and Small Textile Galleries for the summer of 1967. Early in 1968, this display was changed to allow the exhibition of early Ontario material acquired during 1967.

During the autumn of 1967 and early 1968, all the remaining cases and screens in the Textile Gallery were backed with new material. At the same time a fresh selection from the collection of printed textiles, 'English Woodblock and Copperplate Prints,' was put on display.

The exhibition of Japanese country cottons was changed in June 1967 and another selection put on display.

While attending meetings of the Conseil du Direction of CIETA in Lyon, Mr. Burnham gave a paper on 'Technical Aspects of the Preparation of Silk Yarns in the Han Dynasty.'

The Department contributed to the University's teaching programme with seven lectures (Mrs. Brett three, Mr. Burnham four) for the Department of Fine Arts, Third year, Decorative Arts; with 24 lectures and workshop sessions on the History of Costume (Mrs. Holford 20, Mrs. Brett three, Mrs. Zoubek one) for the Ryerson Institute of Technology, Dress Design students; four workshop sessions on designer costumes with the professor in charge working in consultation with Mrs. Brett and Mrs. Zoubek (postgraduate students – workshop sessions as above; History of Costume students – one workshop session with Mrs. Brett) for the University of Guelph, Household Science, Undergraduate students; and four lectures and workshop sessions with Mrs. Holford for Seneca College, Dress Design students.

Gifts to the Department and purchases are too numerous to list here but the following important acquisitions are worthy of particular note: Scottish Privy Seal Purse – 1692–1702, formerly in the possession of the first Earl of Marchmont, member of the Scottish Privy Council, and Lord Chancellor for Scotland during the reign of William III – gift of Miss Katherine Gray; man's figured silk cape with applied embroidery, Spanish, 1550–1575 – gift of Mrs. Edgar J. Stone; embroidered linen gauze altar cloth, Spanish, 17th century – gift of Mrs. Edgar J. Stone; embroidered linen gauze bedspread, Spanish, late 17th or 18th century – gift of Mrs. Edgar J. Stone; collection of English costume, 1830s and 1840s – gift of Mrs. Albert Jarvis and Mrs. E. Jocelin; five lengths of European silks, 18th century; bobbin lace bedspread, Italian, late 17th century – gift of Mrs. T. C. Hastings; group of Chinese and Japanese silks, 17th to 18th century – gift of Mrs. Edgar J. Stone.

Substantial additions were made by gifts and purchases to the collection of 19th century Canadian textiles. A considerable number of 19th and 20th century costume and costume accessories, made or worn in Canada, were given by

many benefactors. A number of donors added to the collection of designer costumes. They include garments by Chanel, Cardin, Fabiani, Patou and Pucci and a substantial addition was made to the Silverman collection by Mrs. Saul A. Silverman.

WEST ASIAN DEPARTMENT

Dr. T. Cuyler Young, Associate Curator-in-Charge, reports with pleasure that the Department's space problem, which formed an important part of last year's report, is solved, or will be solved, as of August 1968, in a manner entirely suitable to our needs and desires.

In the galleries the Prehistory of the Near East Display, scheduled for completion this year, has not yet begun. This is due partly to delays in the service departments, the reorganization of the Display Department, and to heavy commitments elsewhere by the West Asian Department. However, minor reorganization of the Palestine Gallery, including a rationalization of storage under gallery cases, was completed. A single case containing a rotating display of recent acquisitions is now installed in the Palestine Gallery and the manuscript case in the Islamic Gallery was reinstalled. With the help of the Display Department plans are being drawn up for a minor revision of the entire Gallery, including proper lighting.

A further major addition to the Department's teaching and reference slide collection was made and about 350 slides were mounted and catalogued.

The transfer of old catalogue cards to a new cross-reference system is complete and a similar recataloguing of items heretofore only listed in the old catalogue books continues. Some 1,000 items have been processed. Much time has been spent in reorganizing storage to accommodate the flood of material from the Jerusalem and Godin Excavations. The solution to our space problem mentioned above should eliminate for some time the necessity of rearranging storage every year.

Among the acquisitions by purchase were a Persian manuscript of the *Futuh al-Haramayn*. 17 illustrations. 16th century A.D.; an Arabic manuscript *Dala'il al-Khayrat* by Muhammad al-Jazuli. Turkish, mid 18th century A.D.; a miniature. Death of King Yazdagird. c.1340 A.D.; a complete Persian manuscript with miniatures. Stories from the *Shah-nameh*. Only one in our collection. Dated 1444 A.D.; a portrait of a dervish by Riza Abbasi, court painter to Shah Abbas, Isfahan, c.1630 A.D.; a silk fragment in gold and black, Iran. Dated to 1760 A.D.; a delicate gold charm in shape of lion or leopard. Seljuk. Iran. 11th-12th century A.D.

From excavations came one case of pottery and miscellaneous small finds from the 1967 excavating season at Jerusalem and four cases of pottery, small finds and non-artifactual material from the 1967 excavating season at Godin Tepe, Iran. This material, though unpacked, is as yet unprocessed.

Excavations were conducted at Godin Tepe from June 15, 1967, to September 15, 1967, under the direction of Dr. Young, and sponsored by the ROM, the Glenbow Foundation and the Babylonian Collection of Yale University. Excavation will continue for a second season in the summer of 1969, with the added financial support (\$21,000) of the Ford Foundation on a grant to the Iran Project for the training of graduate students in field archaeological methods.

In the field of research, Dr. Golombek completed work on her doctoral dissertation, *The Timurid Shrine at Gazur Gah: an iconographical interpretation of architecture*, which was accepted by the University of Michigan in April 1968.

Most of Dr. Young's research time was applied to the processing for publication of excavation materials from Godin Tepe, including a statistical analysis of some 20,000 sherds.

Dr. Young again contributed to the University's teaching programme with 26 lectures in History 200/220 in the undergraduate programme of the Department of Near Eastern Studies, University College and a graduate seminar in the Department of Near Eastern Studies in the Graduate School on the archaeology of the Hassuna, Halaf and Ubaid Periods in Mesopotamia.

Dr. Young was on leave of absence to take up the position of Visiting Associate Professor at Yale University, spring term, 1968, where he taught two graduate courses and part of an undergraduate course. He attended six sessions of the Columbia University Seminar on *The Comparative Stratigraphy of the 2nd Millennium B.C.* and conducted the last of these seminars in April, 1968. He lectured at the University of Michigan on the ROM *Excavations at Godin Tepe*, November, 1967, and acted as consultant to the University of Michigan Program in Near Eastern and North African Studies' research program on Iran and Afghanistan, November, 1967. He also lectured at Princeton University on *The Chalcolithic and Early Bronze Age in Mesopotamia*, March 1968, and attended the Fifth International Congress of Iranian Art and Archaeology in Tehran, Iran, in April, 1968 as a guest of the Iranian Government, where he read a paper on *The ROM Excavations at Godin Tepe*.

Dr. Golombek lectured to a seminar at the University of Michigan on the results of her field trip to Afghanistan, December 1967.

Publications from the Department include Dr. Young's 'Thoughts on the Architecture of Hasanlu IV,' *Iranica Antiqua* 6: 48-71, 1966, and 'Beside the Silk Road,' *Rotunda* 1 (2): 2-11, 1968 and Dr. Golombek's 'Plaited Kufic on Samanid Epigraphic Pottery,' *Ars Orientalis* 6: 107-133, 1966, *The Timurid Shrine at Gazur Gah: an iconographical interpretation of architecture*. University Microfilms Inc., Ann Arbor, 1968, and reviews for *Nunismatic Notes and Monographs*, *Oriental Art* and *Journ. Amer. Oriental Soc.*

OFFICE OF THE CHIEF BIOLOGIST

The Chief Biologist, Dr. L. S. Russell, reports that during July and August he was engaged in three field projects in Western Canada. The first concerned the Miocene fauna of the Wood Mountain gravels of southern Saskatchewan, and resulted in the discovery of a very rich occurrence of small mammal remains, hitherto poorly known for this part of Tertiary time. The second project was a search for fossil mammals in the Cretaceous of southern Alberta, in which good leads were obtained for future work. The third project was a study of correlation between Late Cretaceous fauna of Alberta and Montana, in collaboration with members of the U.S. Geological Survey. In April a brief visit was made to the Quesnel district of central British Columbia to examine the site of a recent discovery of Oligocene mammals.

Research during the year was mostly on the Cretaceous correlation problem but additional data are required to complete the study. Work on the Oligocene

mammalian fauna of the Cypress Hills of Saskatchewan was resumed. Study of the Wood Mountain fauna by a graduate student, John E. Storer, was supervised.

Dr. Russell addressed the Geological Association of Canada and the Society of Vertebrate Palaeontology on 'The Correlation of Late Cretaceous Faunas between Alberta, Saskatchewan and Montana.'

OFFICE OF THE CHIEF MINERALOGIST

Much time has been spent in collating the data acquired in the studies of the Crown Jewels of Iran. Messrs G. G. Waite and E. B. Tiffany, Research Associates, have assisted with this work which is still in progress.

In collaboration with Dr. A. D. Tushingham, Dr. V. B. Meen, Chief Mineralogist, has now completed the manuscript for the major publication on the Crown Jewels of Iran. The University of Toronto Press reports that publication will be about October 1, 1968.

The re-examination and recataloguing of the gems in the Royal Ontario Museum collection was completed with the assistance of Mr. G. G. Waite.

Eleven formal lectures on the subject of the Museum's study of the Crown Jewels of Iran were given to the Women's Association of the Mining Industry of Canada, the Women's Art Society of Montreal, the Royal Canadian Institute, the London Gem and Mineral Club, the Household Science Alumnae Association and Toronto Home Economics Association, Massey College, the University's Women's Club of Etobicoke, the Women's Art Society, Peterborough Branch, the Arts and Letters Club, the Rochester Academy of Science, the Canadian Cancer Society. Two scholarly addresses were presented to the Institute of Islamic Studies, McGill University, on 'The Crown Jewels and their part in the History of Iran,' and to the Canadian Gemmological Association on 'The Darya-i Nur Diamond and the Tavernier "Great Table".'

The gem collection was put on permanent display in the reconstructed Mineral and Gem Hall.

A number of gemstones have been purchased for the collection. The most notable are a 49 carat faceted bi-colour tourmaline, a 35 carat opal, and a 27 carat zoisite (a newly discovered gem). A faceted green beryl of 42 carats was the gift of Mr. Owen H. Ramsburg of Washington, D.C.

DEPARTMENT OF ENTOMOLOGY AND INVERTEBRATE ZOOLOGY

A high point in the work of the department during the past year was the publication of the *Handbook of Crayfishes of Ontario* as one of the ROM Life Sciences Miscellaneous Publications. The book covers all of the species of crayfishes occurring in Canada east of the Rockies, and provides one of the most complete outlines of existing knowledge concerning the biology of crayfishes in north-eastern North America. The senior author, Dr. D. W. Crocker, is one of our Research Associates, and the book is a splendid example of the mutually profitable relationship which the Research Associate status can provide.

The research work of the Curator, Dr. G. B. Wiggins, on the Trichoptera was continued with the support of a grant from the National Science Foundation. Two special projects were undertaken on families of these insects from India – the Molannidae and the Limnocoentropodidae. Work on a monograph of the genus *Neophylax* was also furthered by a visit to the Museum of Comparative Zoology, Harvard University, to examine holotype specimens. Considerable

progress in field work was made in the study of the life histories of the Trichoptera and other aquatic invertebrates inhabiting temporary ponds. Dr. Wiggins accepted an invitation to visit Michigan State University in November, and to speak to a seminar of staff and graduate students concerning his studies on the immature stages of the Trichoptera.

Mr. Yamamoto, Curatorial Assistant, was very actively engaged in field work, largely for the purpose of adding to the Department's research collection of Trichoptera under the terms of the Curator's grant from the National Science Foundation, and for current study projects. His first expedition, during June and July, covered some 12,000 miles through Oregon and California to Arizona. Three more expeditions were made to the eastern and central United States, covering an additional total distance of some 7,500 miles. Several thousand specimens of the adult and immature stages of Trichoptera and other aquatic insects were collected, including a full set of life-history stages obtained for the obscure brachycentrid genus *Adicrophleps*. Most of Mr. Yamamoto's time between these expeditions has been spent in identifying the specimens and adding them to the collection. Therefore, through his efforts the Department has maintained the rapid and steady expansion of this part of its research collections. Mr. Yamamoto has also assumed responsibility for the department's new general programme of developing in depth its collections of immature insects of all groups.

The work of our Research Associates in entomology has again made a substantial contribution to the department's progress this year. The Rev. J. C. E. Riotte continued his work on the Lepidoptera of Ontario, with field collection and life-history studies this year based mainly at Kendal, Durham County. The central activity in this programme is the rearing of lepidopterous larvae from eggs taken from females of known identity. As a result of this work, about 1,000 larvae of proven species identity and representing all larval instars were added to the research collections. Adult insects added to the research collection from the same project included 2,200 Lepidoptera and 800 of other orders. Three papers arising from his studies on various groups of Lepidoptera were published during the past year. The Rev. J. C. E. Riotte presented a paper, 'Notes on the insect populations of Queen's University Biological Station,' at the annual meeting of the Entomological Society of Ontario, at Queen's University in Kingston in November.

Another of our Research Associates, Mr. T. W. Beak, concluded the baseline survey of the insect larvae and other aquatic invertebrates in portions of the St. Lawrence and Ottawa Rivers. This work has been supported during the past three years by a National Health Grant from the Canada Department of National Health and Welfare awarded to Mr. Beak and the Curator.

Mr. Anker Odum, departmental artist, has been involved for almost the entire year with illustrations for scientific papers. A major project begun this year, for a book by the Curator, will require illustrations of the principal characteristics of larva and case for each of the 35 genera of Trichoptera in North America. He has also participated in two field expeditions to the eastern United States with Mr. Yamamoto.

Miss A. E. Hillmer, departmental secretary, has completed the very large job of typing labels for the mollusc collection returned from the University of Michi-

gan last year. She has begun the assembly of a card catalogue of the literature on North American Trichoptera, and she has begun to type new name labels for those portions of the pinned insect collection which have been re-organized into a unit tray system.

A high point of the past year has been the modification of one small laboratory as a constant temperature room for the rearing of living aquatic insects. This, for the first time, provides facilities for rearing aquatic insects from a wide variety of habitats and through any extremes in local temperatures. The physical installation of the room was financed by the Museum, the cooling unit by the Curator's National Science Foundation Grant, and the rearing tanks, pumps, filters, etc., by the Curator's National Health Grant. A new centre bank of cabinets for pinned insects was built by the Museum carpenters this year. This increases our capacity for pinned insects by 176 drawers, and permits the re-organization of the pinned insect collection to continue.

A total of seven scientific papers was published by the staff during the past year, and several lectures on topics relating to invertebrate animals were given to special groups visiting the museum.

Important accessions for the research collections during the past year include several thousand insects and other invertebrates collected by the staff on field expeditions; 750 insects donated by private individuals; and 50 exotic specimens of insects purchased.

DEPARTMENT OF GEOLOGY

Dr. Walter M. Tovell, Curator, reports that about 1,000 specimens (10 per cent of the present collection) have been renumbered and recatalogued. The data for the specimens are now recorded on punch cards. This system, established under the direction of Dr. P. A. Peach, Research Associate, and Mrs. J. Charing, department technician, has been set up this year, and could easily be converted to tape.

It is with regret that we learned that Dr. Peach has resigned from the Department of Geology, University of Toronto, to take up a position at Brock University, in St. Catharines. However, Dr. Peach has been invited to retain his position as Research Associate and will be able to visit from time to time to direct the cataloguing, although his visits, naturally, will not be as frequent as hitherto.

Dr. McAndrews is well launched into his research programme on glacial and postglacial climatological sequences through pollen stratigraphy. His work has been supported by the Quetico Foundation (\$250) and a NRC special grant (\$2,750), obtained through the University of Toronto (Office of Research Administration). These funds have made it possible to make a preliminary sampling of small lakes in Southern Ontario. D.U.A. grants and a contract forthcoming from the Geological Survey of Canada will make it possible to extend this work. Dr. McAndrews has also devoted considerable time to a study of cores from the Georgian Bay area and extracting pollen therefrom. This is a very valuable method for establishing a detailed chronology of Great Lakes history.

Palynological studies have been made on an interglacial deposit in New York and postglacial lakes in Minnesota. Samples for pollen analysis have been submitted by the Geological Survey of Canada, the Ohio Geological Survey, and the University of Waterloo.

Dr. Tovell continued to co-operate with the Great Lakes Institute and the

Burlington Institute in detailing bottom sediments and topography of specific areas of the Great Lakes, with emphasis on Georgian Bay. The Department's efforts have been rewarded with the suggestion of an interesting new phase of lake development – namely a low-level stage previously unrecognized for Georgian Bay. The details are currently being worked out. Cruises were undertaken by the staff on the C.C.G.S. *Porte Dauphine* and on the M.V. *Theron*, the latter vessel through the courtesy of the Department of Energy, Mines and Resources at Burlington.

The Department was active in the general educational field. The Curator worked with teacher organizations with special emphasis on outdoor education. At the University level, both the Curator and the Associate Curator took part in University courses and seminars.

A small, temporary exhibition on 'Granite' was installed at the exit of the Geology Gallery.

The Department identified numerous specimens for the public, and answered many queries from teachers, students and the public in general.

Dr. Tovell attended the Annual Meeting of the Geological Association of Canada and presented the paper, 'Topography and Bottom Deposits between Tobermory and Fitzwilliam Island, Georgian Bay, Ontario.' At the conference on Great Lakes Research in Milwaukee, Wisconsin, sponsored by The International Association for Great Lakes Research, he read a paper (with Dr. C. F. M. Lewis) entitled 'Bathymetry and Bottom Deposits at the Entrance to Georgian Bay North of Bruce Peninsula, Ontario,' and he participated in the Michigan Basin Geological Society Field Trip Conference, on Manitoulin Island, and contributed a paper entitled 'The Entrance to Georgian Bay' for inclusion in the official Field Trip Guide Book.

He gave the following special lectures: ROM, Extension Course 'The Great Lakes as an Environment,' and 'Bluffs, Spits and Bars: the record of the Great Lakes,' York University – special lecture to the students of the Science Course.

At the conference on *The Niagara Escarpment* he lectured on 'The Physical Features of the Niagara Escarpment' and gave two lectures to third year Ecology/General Science U. of T. students of Dr. Douglas Pimlott, Department of Zoology, September 25 and October 2, 1967. He participated in *Outdoor Education Conference*, at Geneva Park, sponsored by the College of Education, University of Toronto and presented a paper, 'The Field Trip Experience.'

He contributed to the University's Department of Geology annual Geology Survey Camp at Tweed, Ontario and gave the Geology Course 100 to 165 students for four hours per week.

For the College of Education he gave a Type A and Type B Seminar Course in Geology (for High School Teachers) and conducted a lecture tour of the ROM Geology Gallery for the participants in the Advanced Mineral Exploration Course sponsored by the Ontario Department of Mines.

Lectures to Teacher Groups included lectures to the Toronto Elementary School Science Association, 'Along the Niagara Escarpment,' and to the Federation of Women Teachers' Association of Ontario Science Conference, 'Geology.'

He led the Ontario Geography Teachers' Association annual Field Trip, chaired a technical session entitled 'Geology in the Ontario 4-year Programme' for Centennial Science Teachers' Conference, gave a special lecture to Etobi-

coke Junior and Intermediate Geography In-Service Course – sponsored by the Board of Education for the Borough of Etobicoke – and conducted the participants in the aforementioned course on a field trip under the auspices of Etobicoke Board of Education.

General lectures included 'The Niagara Escarpment' – Federation of Ontario Naturalists' Summer Camp, 'Along the Niagara Escarpment' – South Peel Naturalists' Club, 'Conservation and One Hundred Plus One' – Willow Beach Naturalists' Club, 'The Geology of our Area' – Willowdale Gem and Mineral Club, and 'Five Sketches of a Far-Off Land – Peru' – Brantford Nature Club.

He led the following field trips: Albion Hills Conservation Area – public Geology Tour, sponsored by the Metropolitan Toronto and Region Conservation Authority; a tour of Niagara Falls region for members of Brock University Geological Society.

He gave a television programme on 'Fossils' for ETV, in the Invertebrate Palaeontology Gallery.

He was appointed a representative of Metropolitan Toronto and Region Conservation Authority at the Ontario Conservation Authorities' conference on 'The Niagara Escarpment and Ways to Preserve it.' In this connection he assisted in leading a two-day field trip studying lands owned by Authorities on or near the Escarpment. He also acted as chairman on a number of Metropolitan and Municipal Authorities and was re-elected to other committees and advisory boards of an educational and civic nature.

Dr. John H. McAndrews, Associate Curator, gave the following lectures: 'Late Pleistocene Environmental Change and Mammal Extinction' – Cornell University Seminar; 'The Quaternary Environmental History of the Great Lakes' – University of Toronto; 'Pollen Evidence for the Protohistoric Development of the Big Woods, Minnesota' – Bowling Green University, Ohio; 'Pollen Morphology and Plant Systematics' – ROM Biosystematics Seminar; 'Fossil Evidence for Boreal Forest South of the Great Lakes' – Botanical Association of Canada, Lakehead University.

He attended the Geological Association of Canada Annual Meeting, the Plains Archaeological Conference, the Geobotany Conference, the Conference on Great Lakes Research and the Botanical Association of Canada, Lakehead University, Port Arthur, Ontario.

DEPARTMENT OF ICHTHYOLOGY AND HERPETOLOGY

Dr. W. B. Scott, Curator of Ichthyology and Head of the Department, reports that in the field of research and publication the Department continued its preparation of *Freshwater Fishes of Canada*, its studies of Atlantic fishes, esocoid fishes, myctophid fishes and many short-term research projects. Five papers were published. It presented a course in Ichthyology (#1018, Graduate Calendar) and participated in Extension Series of course work. Considerable work went into a number of committees with the ROM and the Zoology Department, University of Toronto, in conjunction with Research Support and Student Relationships.

Important accessions include 500 West Indian fishes, 1,200 fishes from Quetico Provincial Park, Ontario and Atlantic Ocean fishes, paratypes from the University of Miami of a tropical reef fish, *Pomacentrus scotti*, named after the Curator, a collection of live Amur pike, *Esox reicherti*, from U.S.S.R. and a mounted barracuda from Chrysler Canada Limited.

The Associate Curator was cross-appointed to the Zoology Department, University of Toronto as Associate Professor.

The senior technician participated in the preparation of an exhibition of fish and wildlife paintings in the ROM and at Laurentian University.

Reconstruction within the Department continued and the Departmental study collections and facilities were used by a variety of individuals: the artist for the publication *Fishes of the Pacific Coast of Canada* worked for 10 days, under instruction. A Research Scientist of Research Branch, Ontario Department of Lands and Forests worked on a special bibliography for approximately four weeks. In addition a number of university students utilized facilities sporadically throughout the year.

The joint project of the Curators, *Freshwater Fishes of Canada*, with financial support by the Fisheries Research Board of Canada is the major preoccupation and completion date is fixed for 1969.

The Associate Curator studied at the Fisheries Institute of the University of British Columbia in June. In July he initiated a comprehensive survey of the fishes of Quetico Park, in co-operation with the Ontario Department of Lands and Forests and the Quetico Foundation.

Dr. Scott continued work on the Fishes of the Atlantic coast of Canada, financed by the Fisheries Research Board of Canada. (Two projects are completed and accepted for publication.) He worked on his study on lanternfishes (family Myctophidae), bathypelagic marine fishes, supported by National Research Council. An M.A. student is included in this work. Mrs. Radforth is also working on this project and is the Canadian authority on this family of fishes.

A series of shorter term projects involving co-operation with research scientists in other organizations includes: the pink salmon, *Oncorhynchus gorbuscha* in Lake Superior (with R. A. Ryder, Ontario Department of Lands and Forests); the food of the blue pike *Stizostedion vitreum* in Lake Erie (with G. H. Lawler, Fisheries Research Board of Canada); a new species of whitefish in Canada (with K. L. Witek, International Pacific Tuna Commission, California); *Caristius macrops*, a species new to the Canadian Atlantic fauna (with A. C. Kohler, Fisheries Research Board of Canada), and a review of the cottid genus *Triglops* in the North Atlantic Ocean (with D. Webb, Illinois Biological Survey).

Dr. Crossman continued several aspects of his study of the biology, systematics and phylogeny of esocoid fishes including co-operative electrophoretic analyses being conducted at Vancouver Laboratory (Fisheries Research Board of Canada). He also embarked on a comprehensive survey of the Ichthyofauna of Quetico Park as a probable route of postglacial and present-day immigration of Mississippi River fauna into Canada. This survey continues in the summer of 1968 with the co-operation of the Ontario Department of Lands and Forests. Two students under Dr. Crossman's direction will carry out field work for the survey this summer.

With Dr. D. E. McAllister, Curator of Fishes, an illustrated handbook entitled *The Game Fishes of Canada* is nearing completion and submission to the Queen's Printer. Dr. Crossman's paper entitled 'Changes in Great Lakes Fish and Fishing' presented as part of the ROM Extension Series is at press as a chapter in the publication resulting from extension course series. 'Changes in the Canadian Freshwater Fish Fauna,' a paper presented at the meeting of the

Canadian Committee on Freshwater Fisheries Research, is at press as part of the *Bulletin of the Ontario Department of Lands and Forests*. A paper entitled 'The Canadian Fish Fauna' submitted for an issue of the *Bulletin of the Czechoslovakian Academy of Sciences* will appear in early 1969, and four papers arising from aspects of the esocoid research programme are at various stages of preparation.

Mrs. Radforth continued her research on the lanternfishes (family Myctophidae). In addition she completed her manuscript on the Fishes of the Falkland Islands, South Atlantic Ocean.

In co-operation with the library, a book display was prepared for American Museum Association and Canadian Museum Association meetings and retained for the summer months.

In November, Mr. P. Buerschaper contributed a number of paintings to a special exhibition of wildlife paintings hung in the lower rotunda. In May he contributed to another exhibition which was prepared to tour among Canadian universities, commencing at Laurentian University, Sudbury.

Dr. Crossman participated in the University of Toronto Extension Lecture Series and gave a lecture entitled 'Changing fish fauna of the Great Lakes.' He also presented a talk in January at the Annual Meeting of the Canadian Committee for Freshwater Fisheries Research, entitled 'Changes in the Canadian freshwater fish fauna over the last 100 years.'

The graduate course in Ichthyology (Course 1018 in Graduate Calendar) was conducted by W. B. Scott from September, 1967, to April, 1968, who also supervised the M.A. programme for R. E. Zurbrigg.

In order to manage the ever-pressing need for specimen storage, a second collection room equipped with 18-inch-wide steel shelving has been established.

Services in the following forms have been provided to a wide variety of institutions including universities, provincial and federal departments: loans and gifts of specimens for study, identification service for study and report purposes, identification of processed or partitioned material for R.C.M.P. and Ontario Department of Lands and Forests for cases concerning prosecutions, consultation with governmental and university scientists in the conduct of their research projects, refereeing scientific papers and research proposals for international societies and organizations, providing space, specimens and/or advice to visiting scientists and artists, and participation in planning Department of Zoology research proposals and research teaching facilities.

Collections of freshwater fishes, marine fishes, and herptiles were received from the following sources: staff activities, Fisheries Research Board of Canada, New Brunswick Museum, Department of Fisheries of Canada, private collection of the late Dr. A. E. Allin, Fort William, Ontario, B.C. Fish and Game Branch, Illinois Natural History Survey, University of Maryland, University of Karachi, St. Francis Xavier University, Quebec Department of Fish and Game, Ontario Water Resources Commission, West Indian reef fishes collection by W. D. Addison at Tobago, Department of Fish and Game of Prince Edward Island and Department of Natural Resources, Saskatchewan, and University of Manitoba.

Gifts of fishes or amphibians and reptiles were made by this Department in the fiscal year to the following: National Museum of Canada, McGill University, New Brunswick Museum, University of Manitoba, Illinois Natural History

Survey, University of Washington, University of Maryland, California Department of Fish and Game, University of Michigan, and Charles University, Prague, Czechoslovakia.

DEPARTMENT OF INVERTEBRATE PALAEONTOLOGY

John Monteith, Curatorial Assistant in charge of the Department, reports that following the resignation of the Curator, Dr. R. R. H. Lemon, in June, the Department was left, for the second time in twelve years, in his charge. With the appointment of a new secretary, Miss Patti Tarver, the staff numbered two. Subsequently Miss Tarver resigned, and the department now functions with one full-time employee, the Curatorial Assistant, and a part-time helper. However, a new Curator, Dr. Collins from the British Museum assumes his position in the Fall and the Department can then look forward to a period of reorganization and regrowth.

With completion of the new Hall of Invertebrate Fossils, work of a more routine nature in the Department was resumed. An attempt is being made to restore all of the research material to a state of normalcy since, in the construction of the new gallery, the collections were badly ransacked in an effort to extract the best specimens for exhibition. This project is nearing completion.

The Hall of Invertebrate Fossils appears to have stimulated a renewed interest in Palaeontology, judging from the number of people visiting it daily and the numerous enquiries on fossils handled by the Department. However, vandalism, including the loss of some equipment, has temporarily reduced the new gallery's attractiveness. Steps are now being taken to remedy this situation.

Assistance was rendered during the year to scientists in Czechoslovakia, the United States, and Canada. Our type material was the main interest. Where it was not possible to send types, plaster casts were prepared and sent. Expo '67 also called on the Department for information and specimens.

Dr. Madeleine A. Fritz has initiated a revision of the bryozoa in our collections. In this connection, technical assistance is being rendered by the Curatorial Assistant. It should be mentioned that this technical assistance involves the preparation of delicate thin sections of fossils and that the Curatorial Assistant is one of only a few in Canada capable of doing this specialized work.

The Department at the present time is without a laboratory since, shortly after the resignation of the Curator, it was taken over by the Geology Department. The laboratory has since been converted into an office workroom now occupied by the Associate Curator of Geology. Some reconsideration must be given to the new Curator's needs when he assumes his position.

DEPARTMENT OF MAMMALOLOGY

Dr. R. L. Peterson, Curator, reports that the past year has been an extremely busy one for the Department. Mrs. Diana Young joined the staff as Research Assistant at the beginning of the year, and Dr. J. R. Tamsitt joined us as Associate Curator at mid-year. The staff was further increased with the appointment of the following Research Associates: Mrs. Noreen Curry of Winnipeg, Manitoba, Mr. Stanley Brock of Dadanawa, Guyana, and Mr. John G. Williams of Nairobi, Kenya. All have made significant contributions to our research programme and are now engaged in active work on our behalf.

At the beginning of the year the Curator returned from a trip to England where he carried out research in the British Museum before proceeding to Kenya for a few days and then to a month-long expedition in Malagasy (Madagascar)

which proved to be exceptionally fruitful. A rough calculation of the existing bat specimens in the major institutions of the world (excluding the Paris Museum) indicates that the Royal Ontario Museum has the most extensive collection in existence (perhaps greater than the combined totals held by other North American collections, plus perhaps that of the British Museum). Most of the material has now been finally prepared, and research on it can proceed.

Our special bat research programme has continued at an accelerated rate. In the past four years over 10,000 bat specimens have been added to our collections. The past year they came from South Africa, Great Britain, Iran and many other parts of the world. A total of 3,467 mammal specimens were added to the collection, including 3,303 bats. This material has included a number of genera and many species new to our collection (the bats include 12 families, 67 genera and 139 species). The specimens were acquired by purchase, donation and staff collection.

Mr. Stan van Zyll de Jong completed his analysis of variations in otters and has submitted a draft of his thesis, for the degree of Doctor of Philosophy in the University of Toronto, entitled *A Systematic Study of the Nearctic and Neotropical River Otters*.

Mr. M. Brock Fenton completed the research on the bat study for his Master's degree and carried forward further research toward his Doctoral dissertation. He also was engaged as the biologist for a speleological expedition to Puerto Rico, where a detailed study of a large cave was carried out.

Dr. J. R. Tamsitt was extremely busy carrying forward a number of research projects started in Colombia and Puerto Rico, as well as participating in new ones being organized as a result of our own collections. He completed another month-long research programme in Puerto Rico during the year.

The Curator was re-elected President of the American Society of Mammalogists and served as a member of the Council of the Society of Systematic Zoology.

During the past year, a total of four papers were published by the staff, five are now in press, ten are nearly ready for submission and several others are in various stages of completion.

Thanks to the kind support of the Canadian National Sportsmen's Show, the Department recently obtained a new Olivetti-Underwood Programma 101 computer. This unit is proving to be extremely useful and is greatly facilitating the statistical analysis of our data. Its major impact will be reflected in the coming year's research production.

This has been a year of mounting activity and pressure to achieve the opening of the ROM's McLaughlin Planetarium.

Mr. T. R. Clarke, Assistant Curator, and Mr. T. Dickinson, Curatorial Assistant, have collaborated with Dr. H. C. King, Curator, in the preparation of sequence-schedules for six public shows and three school shows to be given during the Planetarium's first year of operation. They have made valuable contributions to the task of redesigning parts of the electronics control system, and have assisted in the selection and purchase of films, photographs and slides. They have also been involved in the many planning stages and activities associated with the design of the display areas, choice of furnishings and interior decor, and installation of a telephone system and other facilities.

McLAUGHLIN PLANETARIUM

Mr. E. Nielsen, Chief Technician, and Mr. L. Kistritz, Senior Technician, satisfactorily completed a two-month training course at Zeiss-Jena during October and November, 1967. Mr. Nielsen collaborated with representatives of Messrs. Stone and Webster, Project Engineers, in a reappraisal of projector-control facilities and has since introduced numerous electronic modifications to the instrument control functions. Machines and equipment for the workshop are on order and will be installed as soon as possible after June 3, the date fixed for the completion of the Planetarium building. Messrs. Nielsen and Kistritz have obtained most of the supplementary projectors necessary for the first year of operation and have discussed projector layouts and picture sequences with the curatorial staff.

Mr. Zig Kucharski, Astronomical Artist, has produced artwork for the *Handbook of the McLaughlin Planetarium* and completed most of the artwork required for the first year of Planetarium operation, with the exception of that for the projected skylines. A start on the skylines will be made as soon as the Veisbergs panoramic projectors have been installed.

Due to a labour dispute in the summer of 1967, practically all work on the Planetarium building ceased for a period of five months. When work resumed it was realized that the onset of winter and winter conditions would delay the completion of the concrete structural dome by at least another four months. Fortunately the University of Toronto approved the cost of erecting a large temporary plastic awning over the third floor of the south wing. This protection enabled Milne and Nicholls Limited, Building Contractors, to continue work on the dome throughout the months of winter, and so effective was it that the dome was completely finished in April. Meanwhile, the development of other areas in the building has made such good progress that the contractor was able to propose May 31 as the latest date for building completion. To meet this date the crates containing the Zeiss-Jena projector assembly and console were moved into the building in early April, as were all the parts for the main structure of the 75-foot Astro-Tec projection dome. As soon as the Star Theatre is completed work will start on the installation of the Zeiss-Jena projection instrument, a project likely to occupy six to eight weeks.

As the building structure approached completion the Curator had to rely increasingly on the advice and co-operation of Mr. J. Thomson, Physical Plant, and Mr. R. Ford, Superintendent's office, University of Toronto, as well as Mr. J. Anthony, Chief of Display Department, ROM. Their support, always most readily given, is greatly appreciated. The Curator is also greatly indebted to Miss E. Feely, Head Librarian, ROM, Mrs. R. Smith, Sales Desk Supervisor, ROM, and Mr. L. Warren, Chief Photographer, ROM, for their help in planning the Planetarium library, bookstore and photography room respectively.

In March last, Display Services Ltd., under the supervision of Opus International Limited, began work on the fabrication of the astronomy display cases and exhibits. In the detailed design of many of the exhibits the Curator has been ably assisted by the Assistant Curator and Mr. G. North, Chief Artist, Display Services Limited.

Copy and illustrations for the *Handbook of the McLaughlin Planetarium* are now with the University of Toronto Press. The first edition of 25,000 copies will be ready for late June. The design of promotional material in the form of leaflets and folders is well in hand. The material includes information on admission

charges, show summaries and time schedules, advance booking and other facilities.

Every effort has been made to ensure that the Planetarium will be ready for an official opening on October 26. To realize this date the Zeiss-Jena installation must be completed by mid-August. Six clear weeks will then be available for the installation and testing of some fifty supplementary projectors, and most important of all, holding an intensive staff-training course. Owing to hold-ups in the installation of other planetariums, the Director decided to fly two technicians from Jena to proceed with the work.

The Curator has given three lectures on the subject of the McLaughlin Planetarium and, in the same connection, has made one television appearance and given four radio broadcasts. He contributed to the Physical Science and Astrophysics Course for third-year students in the Faculty of Music (Class 483, 2 hours per week), conducted the Astronomy Course organized by University Extension (1½ hours per week), and conducted a seminar on 'The Local Cluster of Galaxies' in the Department of Physics, University of Manitoba.

MINERALOGY DEPARTMENT

The highlight of the 1967–68 year was the opening of the new Gallery of Mineralogy. The opening, the culmination of four and a half years of planning and construction, took place on November 13. The Honourable Roland Michener, C.C., Governor General of Canada, officiated at the opening.

The Curator, Dr. J. A. Mandarino, is most happy to acknowledge the many hours put in by the designers, Mr. John B. Hillen and Miss Frances Brittain; the staff of the Department of Mineralogy: Dr. R. I. Gait, Miss M. Ward, Mrs. R. Gallant, Mr. U. Grassi and Mr. G. Pawlick; also by the many workmen, contractors, and friends. That this gallery could not have been built without the strong financial backing of the International Nickel Company, is, of course, obvious. The Museum owes a debt of gratitude to everyone who had a part in this event.

In this year, Dr. Robert I. Gait joined our staff as Assistant Curator of Mineralogy. Fresh from his doctoral studies at the University of Manitoba, Dr. Gait will continue his crystallographic researches in addition to other curatorial duties.

In the field of research, the final installation of the new X-ray spectrograph mentioned in last year's report was completed in December, 1967 – a fitting Christmas present to the staff. Already a great deal of work has been done on the instrument. Of particular interest is a current study of the Garnet Group. Work has also been carried out for other ROM departments. In co-operation with Mr. Bernard Leech of Conservation, several analyses of pottery glazes have been performed. A detailed study of trace element content of fish bones has been started with Dr. W. B. Scott of Ichthyology. Other analyses were performed for Dr. Walter Kenyon and Dr. V. B. Meen.

Dr. R. I. Gait is collaborating with Dr. R. B. Ferguson of the University of Manitoba in furthering studies of the Feldspar Group of minerals. Dr. Gait and Dr. Mandarino are conducting crystallographic research on the molybdenite specimens in the collection. The study is aimed at determining which of the theoretically possible polytypes exist in nature. The 3R polytype, heretofore reported only from five localities, has been identified from six additional localities represented in the ROM collection. This research would not have been

possible without the painstaking work of Mrs. R. Gallant who took most of the powder patterns.

Dr. Mandarino submitted a description of the new mineral *zemannite* to the Commission on New Minerals and Mineral Names, International Mineralogical Association. The name and mineral have been approved by the Commission. Descriptions of two other new minerals have been submitted for approval of the Commission by R. M. Organ (former Curator of Conservation) and J. A. Mandarino.

An important new piece of laboratory equipment, the Franz Isodynamic Separator, has been acquired. The instrument will enable mineral separations to be performed.

*Porthole display in
the new Gallery
of Mineralogy*



In the field, Dr. Mandarino, Dr. Gait and George Pawlick collected at Mont St. Hilaire, Quebec. Dr. Mandarino and G. Pawlick assisted as co-leaders on the Mineralogical Association of Canada field trip to St. Hilaire and Oka, Quebec and Dr. Gait collected in British Columbia.

Dr. Mandarino presented the following papers at the 1967 meeting of the MAC-GAC-AZOPRO in Kingston, Ontario: 'Reflectance Spectrophotometry in Mineralogy' and 'The Royal Ontario Museum's New Gallery of Mineralogy.' He spoke on the functions of the Department of Mineralogy at a seminar of The Soil Sciences Department at the University of Guelph.

Dr. Gait spoke to the following groups: the Walker Mineralogical Club, the Toronto Field Naturalists Club, the Junior Walker Mineralogical Club, the Willowdale Gem and Mineral Club, the Bancroft Mineral Society annual banquet, and the Oshawa Rock and Mineral Club annual banquet.

The Department co-operated with the Junior Field Naturalists in conducting the three-year mineralogy course. The teaching duties were ably carried out by Dr. R. I. Gait, Dr. D. H. Gorman and Mrs. Helen Bush. The annual field trip was led by Dr. Gait, assisted by Mrs. Bush and Miss Muriel Ward.

About 300 specimens were added to the collection, the most important being two large nepheline crystals from Ontario, presented through Mr. Louis Moyd by the National Museum of Canada; 21 Russian specimens received in exchange from the University of Lvov; an exceptionally fine grossular crystal from Quebec; several gemmy blue zoisite crystals from Tanzania; a millerite specimen from Quebec, presented by Mr. Rod Steavley; a group of uvarovite crystals from Finland and fluorite crystal group from Germany, both presented by Dr. M. H. Froberg; and two large childrenite crystals from Brazil. About 20 species new to the collection were acquired.

Dr. Mandarino finished his three-year term on the Executive Committee of the Mineralogical Association of Canada on December 31, 1967. He continues to serve on the Nomenclature Committee of the Mineralogical Society of America. Dr. Gait was elected to the Council of the Walker Mineralogical Club. Dr. Mandarino was awarded a National Research Council of Canada Senior Research Fellowship to conduct research in France. He will spend nine months in the laboratories of the Bureau de Recherches Géologiques et Minières at Orléans, commencing in July, 1968.

Several hundred specimens were identified for the public during the year. As usual, many specimens and/or parts of specimens from the ROM collection were made available to mineralogical researchers throughout the world.

To assist in replying to the very great number of requests from teachers, students and others for information, the department obtained stocks of government publications and free literature from various mining companies, and has produced a list of suggested books for public and high school students.

A special *Open Night* was held for the Mineral and Lapidary Clubs of Ontario on December 8, 1967. In view of the 400 people who attended it is hoped that this very successful event may become an annual affair.

DEPARTMENT OF ORNITHOLOGY

Dr. Jon C. Barlow, Curator, and Mr. James A. Dick, Curatorial Assistant, continued work on their manuscript dealing with birds collected by departmental staff in British Honduras in 1966 and with important specimens obtained

subsequently in that country by Mrs. Esther Pendergast, wife of ROM Field Director Dr. David Pendergast. Dr. Barlow re-examined over 300 specimens of the European Tree Sparrow from Germany and Illinois and treated the mensural data with UNIVAR and STP statistical computer programmes developed by Dr. Dennis M. Power, Assistant Curator. Several hundred specimens of Red-eyed and Philadelphia Vireos, collected in 1966 and 1967 at seven localities across Canada between Lac St. Jean, Quebec, and Busby, Alberta, were given similar statistical treatment in an attempt to correlate intersample character differences with environmental factors. Analysis of the ethological parameters of the Gray and Philadelphia Vireos based on movies and notes taken in 1966 and 1967 in west Texas and northern Ontario was begun. The study continues in 1968-69. This work is part of a major programme concerned with studies of systematics and evolution of the avian family Vireonidae.

Mr. James L. Baillie, Assistant Curator, pursued research on the ornithological history of Ontario. The first of his two major ongoing projects is the collection and digesting of the data contained in the 27 journals so far unearthed of Charles Fothergill who lived in Ontario between 1817 and 1840, and who described about 187 species of birds, thus providing the only comprehensive picture of the avifauna of early 19th century Ontario. Second, the compilation of a history of ornithological work in Ontario from its beginnings in 1768, a manuscript comprising a short summary of the life and accomplishments (with photo) of each worker, is in preparation. In addition Mr. Baillie has continued his extensive field observations in the Toronto region.

Dr. Dennis M. Power, Assistant Curator, has completed and submitted for publication a major paper on geographic variation of Red-winged Blackbirds in central North America. Expanding this work, computer-based multivariate statistics were used to investigate the relationship between character variation in red-wings and certain climatic and geographic factors. A series of computer programmes to handle univariate and multivariate statistical treatment and tests, and to perform certain graphic procedures of use in analyzing data common to studies in systematics and evolutionary biology, were designed, written, and put in use by Dr. Power for the University of Toronto IBM 7094 II System. Other routines are being added to our library of programmes, including procedures common to *numerical taxonomy*.

Mr. James A. Dick, Curatorial Assistant, in addition to aiding Dr. Barlow in several projects as already mentioned, collaborated with Dr. Howard Savage, Research Associate, in a manuscript describing an instance of the avian disease fowl pox in a Cassin's Sparrow. The paper is presently in press. Mr. Dick and Dr. Power collaborated in an investigation of the racial status of wintering and breeding Robins taken at Lawrence, Kansas in 1964-65. Mr. Dick began work on a study of geographic variation in House Sparrows in Ontario.

Rev. R. Charles Long, Research Associate, continued preparation of a major manuscript on aspects of the natural history of the African Violet-backed Starling. Research on the migration and systematics of this species is also in progress. He also continued critical examination of our African collection including material recently acquired from western Kenya.

Dr. Howard Savage, Research Associate, critically examined avian and mam-

malian bones excavated by Miss Helen Devereux of the Department of Anthropology of the University of Toronto, from a Beothuk housepit site in south-eastern Newfoundland. Bird bones included Canada Goose, Cormorant and those of an unidentified seaduck of the sub-family Aythyinae. Dr. Savage also investigated fowl pox, co-authoring the paper with Mr. Dick.

A number of volunteers have contributed to departmental projects throughout the year. Dr. George Peck again took charge of the Ontario Nest Records Scheme, a departmentally sponsored project, and updated the card file, circularized the public for support and prepared a detailed report concerning data from the previous season. Dr. Peck received a grant from the Canadian National Sportsmen's Show which helped to defray some of the costs of the scheme's operation. The Department is especially grateful to Dr. Peck and to those who assisted him, Dr. George Sparrow, Robert Montgomerie, Barry Ranford and Mrs. Shirley Dugdale, Departmental Secretary. Mrs. Barbara Wilkens and Mrs. Margo Weigle assisted in a variety of projects.

In the field, Dr. Barlow studied Philadelphia and Red-eyed Vireos for a brief period in July of 1967 in central Ontario, taking films of behaviour and high-fidelity tapes of vocalizations. In late October 1967, the Curator and Mr. Dick studied the introduced populations of the European Tree Sparrow in west-central Illinois and were able to determine the eastern and northern limits of the range of this species. This research has been supported by grants from the Chapman Memorial Fund of the American Museum of Natural History and the Canadian National Sportsmen's Show. Between April 26 and June 3, the Curator, Mr. Dick, Ross D. James, technician and graduate student, and Mr. Brock Fenton, graduate student, studied the behaviour and ecology of the Gray and Solitary Vireos in the Sierra del Carmen Mountains of northern Coahuila, Mexico, the Chisos Mountains, Big Bend National Park, Texas, and the Davis Mountains, also in the Trans-Pecos of Texas. Slow-motion 16 mm films of vireo behaviour and high fidelity tapes of vocalizations were taken in the Chisos and Davis Mountains. The research in northern Mexico between May 21 and 24 was done in the company of Dr. R. Roy Johnson of the Centre for Anthropological Studies, Prescott College, Prescott, Arizona, and a team of botanists led by Dr. A. M. Powell of the Biology Department of Sul Ross State College, Alpine, Texas. The discovery of a breeding population of Gray Vireos in the Sierra del Carmen was the most significant find as this bird has not been previously recorded as a nesting species in this part of Mexico. During the work in Big Bend National Park, the Curator again held a Research Collaboratorship and the research was officially designated as part of the U.S. National Park Service Programme for 1967-68. Birds totalling 280 specimens were collected in Mexico, the Trans-Pecos of Texas and southeastern New Mexico during the course of the field studies. In addition 29 bats, several hundred insects and other invertebrates and more than a dozen herpetological specimens were obtained for the Museum's collection. In June, 1968, Dr. Barlow, accompanied by R. D. James, again studied Philadelphia Vireos near Kirkland Lake, Ontario.

In July and August of 1967 Dr. Power, accompanied and assisted by his wife, joined an ROM archaeological party led by Dr. T. Cuyler Young, Curator of the Museum's West Asian Department, working in the central Zagros Mountains

of western Iran. There the Powers collected 170 specimens of the more common birds. Dr. Power has prepared a short paper on the results of this ornithological research. Dr. Power conducted field work and collecting as part of studies on the ecology and variation genetics of introduced and expanding populations of birds. These studies concern House Finches, introduced around New York City, and Brewer's Blackbirds, populations of which are rapidly expanding eastward through Ontario and portions of the United States.

Early July, 1967, marked the terminus of a field-trip, with stations in Manitoba, Saskatchewan and Alberta, undertaken by Mr. Baillie and Mr. Dick to collect specimens of Red-eyed and Philadelphia Vireos for Dr. Barlow's research. Mr. Dick also collected in northern New Mexico, Kansas, and Missouri in late July. In August, Mr. Dick and R. D. James collected Vireos and Warblers in the vicinity of Toronto.

The Rev. Mr. Long continued his field studies of the ecology and behaviour of the American Robin near Toronto and at sites in northern Ontario. In May and June of 1968 in the company of Dr. Peck, he studied waterfowl in Western Canada. Both projects are supported by grants from the Canadian National Sportsmen's Show.

Our specimens were displayed by the Museum's General Display Department and in several local schools, stores and museums.

The Curator presented a paper at the 86th meeting of the American Ornithologists' Union at College, Alaska, entitled 'Comments on the comparative ethology of vireos with special reference to *Vireo vicinior* and *V. philadelphicus*.'

In the course of the year Mr. Baillie spoke to the North York Horticultural Society on 'Garden Birds,' to the Bird Group of the Toronto Field Naturalists Club on 'Attracting Birds,' to the Ontario Bird-banding Association on the 'Preparation of Bird Skins,' and to the Toronto Field-Biologists Club on 'The Bird Count for 1967.' Dr. Power presented a paper entitled 'Geographic variation of Red-winged Blackbirds of the Great Plains' at the 85th meeting of the American Ornithologists' Union held at the Royal Ontario Museum. At the 86th meeting of the A.O.U. held at College, Alaska, he presented a paper on 'The Adaptive Significance of Intra-specific Variation in Red-winged Blackbirds.' Mr. Long spoke to the Toronto Ornithological Club on the results of his field trip to Moosonee; to grade eight children of St. Andrews School, Ajax, on 'Spring Birds,' also to the Kitchener-Waterloo Naturalists Club on 'African Wildlife' and to the Bowmanville Boys Training School on 'African Birds.' Dr. Savage spoke to the Brodie Club on 'Fowl pox in Native North American Birds' and to the staff members of the Department of Anthropology of the University of Toronto on 'Primate Pathology and Osteology.'

Dr. Barlow in his capacity as Assistant Professor of Zoology supervised the research of three graduate students in zoology and served on the advisory committees of five others. For the 11th year, Mr. Baillie presented a series of eight lectures on the study of birds in the Natural Science Course of the Evening Tutorial Classes, University of Toronto Extension Courses. Dr. Power was cross-appointed as an Assistant Professor of Zoology at mid-year.

Rearrangement of parts of the research collection was continued. About 2,000 specimens were catalogued and installed in the collection in the fiscal year and 1,700 specimens were accessed. Emphasis was placed upon increasing our

holdings of anatomical material. Once again the varied facilities of the department were utilized by the public, by researchers from other museums, universities and government agencies and by visiting classes from the universities of Toronto and Waterloo and the Conservation Officer Training Group of the Ontario Department of Lands and Forests.

Parts of the collection were studied by the following: Kenneth P. Able, University of Louisville – Systematics of Henslow's Sparrow populations. Dr. Robert Anderle and Dr. Harold Axtell, Buffalo Museum of Science – Systematics of Gulls and White-crowned Sparrows. Dr. Keith Dixon – Utah State University – Systematics of African Bush Shrikes. Dr. Anthony J. Erskine, Wildlife Biologist, Canadian Wildlife Service – moult of Red-breasted Merganser. Mr. Jerome Jackson, Museum of Natural History of the University of Kansas – adaptive significance of sexual dimorphism in Downy and Hairy Woodpeckers. Mrs. Coleen Nelson, Manitoba Museum of Man and Sciences – downy young of anatids. Dr. Robert Payne, University of Oklahoma – social parasitism in African Weaver Finches. Mr. Bruce Thorneycroft, University of Toronto – Systematics of White-throated Sparrows.

Dr. Jon C. Barlow was voted an Elective Membership in the American Ornithologists' Union, an honour restricted to 200 of the society's 3,600 members. He also was promoted from Associate Member to Full Member in the Society of the Sigma xi, an international society for the encouragement of scientific research.

Grants were received by members of the Department from the National Research Council of Canada, Department of University Affairs, Canadian National Sportsmen's Show, Local Committee on Arrangements of the American Ornithologists' Union to further their research programmes.

Nine hundred and ninety-seven birds were added to the collection from many parts of the world.

DEPARTMENT OF VERTEBRATE PALAEONTOLOGY

Dr. A. G. Edmund, Curator, reports that field work was conducted in the Cypress Hills of Saskatchewan and in the area south of the Milk River in Alberta. The former site, of Oligocene Age, has been worked by this Museum before, but a fortunate discovery was a new deposit rich in the remains of brontotheres, giant pigs, and other mammals. The Milk River project is an attempt to determine the faunas of four Late Cretaceous formations, and to associate these with their original environments. Sponsored by the National Research Council, this project demands the detailed exploration of a large area of precipitous badlands. Unfortunately a serious accident involving the Land Rover brought an end to this project. However, both of the above-mentioned field programmes will be resumed in the summer of 1968, using larger crews and better equipment.

Much of the Curator's research time was spent completing the manuscript for the Dentition section for the Biology of the Reptilia, now being published by the Academic Press. This section, being a summary of contemporary knowledge of the subject and including unpublished work by the Curator, runs to about 100 printed pages.

The modern osteological collection continues to grow, thanks in a large measure to the dedicated efforts of the new technician, Mr. Franklin Ross. His experience and training in herpetology and osteological preparation have

resulted both in an increase in the quality and quantity of specimens, and also in their orderly arrangement in the collection.

The systematic palaeontological collection has increased greatly, partly as a result of the preparation of fossils recently collected and partly by the addition of high fidelity copies made from specimens in other museums. In May, 1968 a large number of fine casts were made from the Oligocene collection in the South Dakota School of Mines and Technology. The total number of specimens or lots of specimens added to the collection this year is 589.

A collection of about 100 well-documented palaeolithic flint artifacts was donated by Mr. H. D. Hubbs of Belleville.

Dr. C. S. Churcher, Research Associate, again spent much of the summer with the Geological Survey of Canada examining pleistocene deposits in Alberta and Saskatchewan. Several new sites were discovered and a rich fauna is now being identified. During the winter months Dr. Churcher has been on a sabbatical in South Africa where he has pursued several research projects.

Three graduate students are currently working in the Department under the direction of Dr. Churcher and Dr. Russell. It is hoped that this phase of our co-operation with the University can be not only continued but considerably expanded. Increasing involvement of graduate students is a sign of healthy growth.

In close co-operation with the Department of Display new and imaginative plans for the revision of the badly out-dated vertebrate galleries are being prepared. The first section, largely an introduction to the subject of vertebrate palaeontology, has now reached the working drawings stage, and construction is expected to begin in the fall of 1968.

The live reptiles placed on display last year have thrived and, to judge by the audience they attract, have proved to be one of the most popular areas in the Museum. Plans have been drawn up to re-house these animals in more suitable quarters, where they can be shown to greater advantage and still retain adequate accessibility for maintenance.

The highlight of the display programme in the department was the opening of the mounted skeleton of *Protoceratops*, a small, primitive horned dinosaur from Mongolia. Conceived and organized by the women of the Members' Committee of the Museum, the money was raised largely by donations from school children as a Centennial Project. Parts of the skeleton were purchased from the American Museum of Natural History and the complete skeleton restored in natural pose in time for an unveiling before Christmas.

New working areas and equipment storage were installed in the preparation laboratory, permitting more efficient use of the available space. In view of the greatly expanded exhibition programme, these facilities will be well used.

The last of the old ash storage cabinets will soon be discarded, with the installation of new modular cabinets designed by the Curator and built by the ROM carpenters. These permit the efficient and integrated storage of specimens of greatly varied size. For the first time the collection can be truly said to be in systematic order and not scattered on the basis of size of specimen.

As mentioned earlier, Mr. Franklin Ross replaced Mr. Timothy Cowan as technician. Mr. Ross's knowledge and dedication have been of great assistance in the smooth operation of the Department. Mrs. Suzanne Cooper joined the

staff in February and is managing the onerous chore of cataloguing the collections. Another welcome addition to the staff is Mr. Gerry O'Connor who brought with him both his intimate knowledge of plaster-working and his experience gained earlier in the construction of the Museum's new Mineral Gallery.

The work of Mrs. H. A. Jones, Mrs. Diane MacFeeter, Mrs. Catherine Jeffs, and Mrs. Joan Hodgson, energetic volunteers, has greatly assisted the progress of the Department and to them goes a sincere vote of thanks.

DISPLAY GENERAL DEPARTMENT

During the first five months of the 1967-68 fiscal year the Display Department was virtually without the benefit of management. Since assuming control of the department the new Chief, Mr. John Anthony, has implemented the following general reforms. A basic re-organization of the department has turned it from a basic arts and crafts centre to a working display department with design ability. Relationships between the Display Department and other departments have been re-established and improved so that maximum co-operation now exists, especially with the service departments. Departmental morale has improved and a strong sense of purpose has been established. Work output, both completed and in progress, has been drastically increased. From July 1, 1967 to December 1, 1967, the present Chief was not present but work on the design and models for the Ethnology galleries continued. Support was given to the *Modesty to Mod* Show and to a Book Display. From December 1, 1967, to June 30, 1968, a new print area in the third floor rotunda was completed; Gallery Six was revised; the French 18th century room was installed. In the administration area, designs were made and carried out for a new accounting area in the basement and the interior design of the Planetarium executive areas and lobby. A number of temporary exhibitions were designed and carried out, including six print shows, 'Stained Glass,' 'Buildings in Ontario,' Education Department show, and four

*The new outdoor
arkette and display
area*



exterior showcase changes. The two major exhibitions this year were 'The Arts of India and Nepal,' and 'Jensen Silver.'

A new graphic programme was introduced, typestyle was standardized, posters, signs and advertising media were supplied on demand. A programme of revising, improving and replacing museum graphics was implemented on a continuing basis and progresses primarily when time permits.

All facets of departmental administration have been effectively reorganized including all paper-work and this despite the fact that the Department does not have the services of clerical staff.

Generally speaking, this Department's overhead factor has been reduced through a smaller number of staff while work output has greatly increased. Its performance should continue to improve over the next fiscal year to a point where it becomes a prime asset to the entire museum.

EDUCATION DEPARTMENT

Miss Norma Heakes, Supervisor, reports that so great now are the demands on this Department that a major problem is becoming that of handling large numbers – over 110,000 per year. In late June nearly 2,000 children a day were pressing into the Museum.

In the last twenty years the pattern of school visits to the Royal Ontario Museum has been dramatically changed by three outside influences. First, in 1954 when the Municipality of Toronto was incorporated, school classes from the eleven school boards began to visit in greater numbers. Second, the construction of Highways 400 and 401 made it easier for groups to travel to the city; third, the celebration of Canada's Centennial made her citizens very conscious of the fun and value of getting to know each other. Museums sprang up like mushrooms. The Centennial gave momentum to the changes which are taking place in educational methods, namely in the appreciation that the whole world is a classroom. The ROM is experiencing a tidal wave which was started last year. The thousands of school children who visited Expo will continue to explore their country. In addition, the reduction in the number of examinations at all levels and the abolition of the Grade 13 Provincial examinations has already resulted in the extension of secondary school visits throughout the month of May and well into June.

In order to accommodate as many classes as possible, this has been a year of experimentation in the Education Department.

The most important experiment is one made possible through the concern and financial assistance of the Metropolitan Board of Education. This year two teachers were seconded to our staff, Miss Betty Elbourn from the Borough of York, and Mr. James Lovekin from the Borough of Scarborough. They have acted as liaison teachers between the Museum and their school boards in particular, and in a general way with the other four boards. Miss Elbourn and Mr. Lovekin have helped the staff of the Education Department to keep abreast of the current philosophies and trends in the formal school world, and to introduce the personnel of the two fields to each other. They, in turn, have had the opportunity to become acquainted with the complex operation of the Museum.

With the assistance of the extra staff a variety of programmes was offered which attracted capacity audiences.

The auditorium sessions for Grades 5–8, given once a week, began with films relevant to the topic of the day, followed by gallery tours in smaller groups.

During the second session the pupils were given the opportunity to handle objects, answer a quiz, or even shape a stone tool. The topics ranged from 'Marco Polo and China,' to 'Muscles and Movement,' from 'Under Your Feet' to 'Minerals for Man,' and took the groups into all parts of the Museum. 'A.B.C.'s – Arts, Beliefs, and Customs' was a successful example of the comparative approach to learning. The entire programme was a supreme example of the old technique, team work, labelled in a new jargon, team teaching. It required the co-operation of the entire staff, sometimes in supporting roles, sometimes as chief organizer and master of ceremonies. Next year, by popular demand, the number of programmes will be increased from 26 to 32.

For the Secondary School students a series of lectures under the title of *Research Inside Out* was arranged. Invariably the audience discovered that curators lived in no comfortable, quiet laboratory or office, but were often in the centre of great activity and discomfort. They might be catching caddisflies in Alberta, or bats in Madagascar, or unearthing evidence of former civilizations in British Honduras. It was our hope that these lectures might attract future specialists to the museum world. A second lecture series is being planned for 1968-69.

A fourth innovation, this past year, was the designation of certain days as Primary Days when teachers of Kindergarten to Grade 4 could bring their classes to the Museum. These particular days for unconduted classes freed the upper grades from the frequent interruptions which constantly occur as younger groups move from gallery to gallery.

The services to hospitals were expanded, again made possible by the increase in the number of teachers in the Department. The Clarke Institute of Psychiatry had two teachers for their primary grades. The Occupational Therapy Department at the Ontario Hospital, Queen Street, arranged for museum programmes. During each visit, the patients handled artifacts and specimens and enjoyed short films related to museum subjects. The programme eventually attracted 160 people, and was used as a basis for training sessions with nurses and therapists. The Museum visit at the Hospital for Sick Children was part of the regular school programme, while at the Ontario Hospital for Crippled Children it was an after-school event. Two of the Members' Committee assisted with both programmes.

The Canadian National Institute for the Blind group should be mentioned in the category of Special Events. Preparing for non-sighted visitors presented a real challenge to the staff. All were delighted with the satisfaction gained from communicating through the sense of touch. Some of the visits took place in a workroom to which objects had been transported. Two visits were held in the galleries where the sculpture of China and Greece was studied in the same atmosphere as sighted people.

Although the school visits to the Museum and the Museum visits to the schools occupied the greater part of the staff's time, in this report it is enough to record that the numbers of pupils will be above those of last year.

The Saturday Morning Club, operating in a more informal way, also presented a different type of programme. Each group stayed with a leader for only four weeks, moving on then to another leader whose subject was different. The members enjoyed the variety.

In the adult education area, Miss E. Martin was responsible for organizing

four successful Extension Courses. *Chinese Art*, *The Great Lakes as an Environment*, *In Search of Canada – West and North* and *Digging Into the Past* attracted 2,141 people from many walks of life. She was also responsible for the ten well-attended Sunday Film programmes. In fact, on four occasions the films had to be repeated to an overflow audience. Summer films were not as well attended, but just as much appreciated by those who dropped in either on a Tuesday or a Thursday afternoon.

We are happy to record that the Ryerson Polytechnical Institute again sent students from the Furniture Design Course for lectures in our galleries. A change in the curriculum meant that third-year students instead of first-year students attended. From our point of view, it was more successful to have the more mature student.

The programme of the Education Department has been made possible because of the sympathetic co-operation of every department in the Museum. Its success has depended upon the flexibility and versatility of the staff of the department. All firmly believe in the value of teaching with authentic artifacts and materials, yet each is individualistic in his approach and in the talents she or he brings to the task.

THE OFFICE OF INFORMATION SERVICES

Information Officer Mr. Bruce Easson reports that activities of Information Services broadened and deepened during the year. *Rotunda*, the quarterly bulletin of the Royal Ontario Museum, was launched in January through a grant from the Laidlaw Foundation. All members of the Department were deeply involved in editing and producing the magazine in consultation with the Director who acts as managing editor. Vital assistance has been provided by Mrs. Marie Hands, a freelance artist who designs each issue, and by Mr. Leighton Warren, the ROM's Chief Photographer. Response to *Rotunda* has been encouraging, not only from ROM staff members who write the articles, and from Museum members who receive their subscriptions free, but from those outside the Museum community. A single direct mail campaign attracted 300 paid subscriptions from libraries and schools, and additional subscriptions arrive almost daily from individuals and institutions, both in Canada and in other countries.

Appointment to the staff of Mrs. Olive Koyama as Editor of Publications and a substantial increase in the publications budget resulted in the acceleration of other aspects of the publications programme. By June, 1968, 12 titles were published or at the printers: five Art and Archaeology Occasional Papers, three Life Science Contributions, one Life Science Occasional Paper, a *Handbook of the Far Eastern Collection*, and a *Handbook of the McLaughlin Planetarium*. Both handbooks contain numerous illustrations, some in colour, and are intended for a wide general readership.

Further strength was added to the Department with the retaining of Mr. Burton Kramer to design all printed material of the Museum. His creativity has resulted in a new approach to ROM posters, invitations, brochures, informational signs and lettering, and stationery.

The Department's publicity programme included three major exhibitions: *Living Legacy: A Tribute to Sigmund Samuel*, *The Arts of India and Nepal*, and *Jensen Silver*; the new Gallery of Mineralogy; the annual Teachers' Open Night; the first Mineralogy Open Night; lectures, films, tours and several smaller exhibits and events.

The Department co-operated with Mr. Donald Webster, Curator of Canadiana, and Miss Norma Beecroft, noted Canadian composer, in the organization of the first series of four Sunday *Concerts at Canadiana*. Music critics reacted favourably to the series and the CBC recorded one of the concerts, folk songs by Jacques Labrecque, for broadcast.

Another Department project, the Ontario children's campaign to buy a *Protoceratops*, exceeded its \$1,500 objective 15 weeks after it was started in June, 1967. To celebrate, 150 youngsters from among the thousands who contributed to the purchase fund were invited to attend a splendid 'cookies and lemonade party' for the official unveiling of the reconstructed 'little dinosaur.' Miss Beverley Slopen, Information Assistant, was responsible for much of the success of the *Protoceratops* campaign. Later the Department helped establish a financial campaign to buy a valuable fragment of an Egyptian tomb painting.

During the year, members of the press, television and radio maintained a strong interest in Museum activities. One particular example was the discovery by the ROM Archaeological Expedition at Altun Ha, British Honduras, of a priceless carved stone head of an ancient Maya sun god. The ROM's first sketchy report of the find was published by the *Globe and Mail* and the Canadian Press urged Reuters, its news service ally, to obtain a complete story from British Honduras. This story was carried internationally. When Dr. David Pendergast, Expedition Director, arrived in Toronto with the stone head, he was met at the airport by photographers and a hastily-arranged news conference was crowded with press and broadcast reporters.

Another highlight was the completion and broadcast May 30th, during Museums Week, of the CBC television programme, *Swann of the ROM*, featuring the Director discussing the Museum and his work. The CBC also filmed in the ROM segments of a dramatic programme with a museum theme which, although fictional, helped discourage the false notion that museums are dull!

Meanwhile, the Department's service of arranging and providing photographs for publishers and other outside users continued at a high level. Miss Ursula Beasley, Department Secretary, handled all details of this service along with her many other duties.

Mrs. Barbara Hill of the Museum Members' Committee volunteered to work in the Department one afternoon a week. She revised the important mailing lists and made considerable progress in gathering historical material about the institution.

The diversity of Information Services' projects reflects the diversity of the Museum. What the Department was able to accomplish would have been impossible without the support and co-operation of the Curators, Department heads and all other staff members. Particular thanks for their assistance must be expressed to Mr. John Anthony, Chief of the Display General Department, Mr. L. Warren, Chief Photographer, Mr. Ivan Lindsay, Chief Preparator, Mr. Donald Sinclair, Chief Carpenter, and Mr. Alan Lawrence, Building Superintendent. Their competence often rescued the Department from last-minute difficulties.

LIBRARY Miss E. Feely, Museum Librarian, reports an increase in the use of the Library over the preceding year. Reflecting the levelling effect of crowded conditions and a limited budget, the increase was less dramatic than in previous years, in pro-

portion to the services expected by Museum staff and public users. During the year, Museum staff requested 2,094 reference searches, and borrowed 4,849 titles for departmental use. In support of curatorial research, Library staff borrowed 605 titles from other North American libraries (457 from the University of Toronto library).

Assistance to Museum visitors and students (including requests received by mail and telephone) totalled 1,671 reference searches. Other libraries borrowed 236 titles from the Museum library for their users.

Cataloguing new acquisitions, including many significant monographs, was a major activity. Recataloguing of older collections received less emphasis, permitting the staff to purchase and catalogue the core collection for the Planetarium Library (to open in October, 1968). This project, the largest undertaken during the year, is progressing on schedule. Organization of the Canadiana collection was completed in the spring of 1968. As the result of all cataloguing activity, 16,200 cards have been added to the Library's catalogues (with additional cards for the University's catalogues, and the National Union Catalogue).

The Library was responsible for distribution of eight Museum publications to institutions throughout the world, including the first two issues of *Rotunda*. The latter was warmly received, with many important publications received in the Library in exchange.

Miss Holland assisted Miss Spencer (Department of Ethnology) in compiling a bibliography of the Patricias region, published by the University of Toronto Press as *Northern Ontario: a Bibliography*.

In June, 1967, the Library prepared an exhibit of Royal Ontario Museum publications and papers by Museum staff for display in the Armour Court during the joint meeting of the American Association of Museums and Canadian Museums Association.

Miss Feely supervised two students from the University's School of Library Science who were assigned to the Museum Library.

In July, Mrs. V. A. Ritchie joined the Library staff as Assistant Librarian. Mrs. J. Alexander retired from the staff in June, 1968, after eight years of service; her experience will be greatly missed.

A library equipped with excellent collections and offering varied services of high quality is an essential part of an active museum. The Museum Library has yet to attain the highest standards, and is in an increasingly difficult position as the result of growing demands on the collection – demands which are not matched sufficiently by improvements in budget, equipment or physical plant. At present, there is little hope that the Library will be able to meet either the requirements of new curatorial appointments and expanded research projects (risking loss of staff confidence in the Library), or the many services expected by visitors and students. That the Library is able to maintain its present quality of service is the result of the good will and dedicated work of each member of the Library's staff.

The Director would like to add a personal note of appreciation to the Librarian for advice on library matters beyond the normal course of duties.

PHOTOGRAPHY DEPARTMENT

No museum can function without an efficient photography department and the ROM is here fortunate in its staff which has met all demands – sometimes seemingly outrageous – on its facilities and spirit. It produced 15,327 prints, 4,457

negatives, 5,930 slides and 144 colour transparencies, a truly tremendous output.

Such a bald statement of output belies the very hard work in inadequate quarters which Mr. Leighton Warren and his staff put in for all departments without losing their cheerful willingness to do everything in their power to accommodate the staff and without any decline of standards.

PROGRAMME SECRETARY

The increased tempo in the life of the Museum is reflected in the rapidly growing membership and exhibition programme – both of which responsibilities are efficiently carried out by Mrs. Helen Downie and her staff.

Membership of the Museum has increased dramatically to 1,882 including a remarkably high proportion of Life Members (471). A Life Membership for a young person is probably the best cultural investment in the city.

Co-operation with the reorganized Design Department has resulted in more temporary exhibitions being smoothly mounted and presented. Major shows were *Living Legacy – A Tribute to Sigmund Samuel*, *The Arts of India and Nepal* and *Jensen Silver*. All three were occasions for most enjoyable opening evenings for members.

In the Lower Rotunda ten exhibitions were mounted: *Embroideries by Children of Chijay (Peru)*, *Birds by Canadian Artists*, *Aesop's Fables*, *Nature as Art*, *Calligraphy in Islamic Textiles*, *Work of the Children of the Saturday Morning Club*, *Yugoslav Graphic Art*, *Nature Photographs by Jeanne White*, *The Second Annual Exhibition of Saturday Morning Club Children*, and *Contemporary Mexican Prints*; of these *Yugoslav Graphic Art* was outstanding. For this we owe a debt of thanks to the good offices of the Yugoslavian Consul.

A most attractive new exhibition area has been created in the third floor rotunda and in this were staged three exhibitions: *Buildings in Ontario*, *Exhibition of Graphics*, and *The Art of Stained Glass*.

Twelve public lectures were held but it must be admitted that attendance was not what it should have been or what the lecturers deserved. The Museum may be forced to reconsider the whole programme of public lectures and its value to the community. On the other hand the public functions held in the Museum drew record crowds, a source of great satisfaction to their organizers. The theatre and lecture room were as popular as in previous years and this despite their somewhat antiquated facilities.

It would be ungrateful to let this year's report pass without mention of Mrs. Downie's service to the Museum in obtaining two Centennial Caravans for conversion to museumobiles. With bulldog determination she cut through red-tape at both federal and provincial levels, swept aside financial difficulties, surmounted organization and staffing problems, pushed forward design and construction plans and has generally cajoled and belaboured all and sundry with that feminine single-mindedness which is the despair of mere men. This has been *her* project and the province will have cause to be indebted to her.

MEMBERS' COMMITTEE

The Museum is fortunate in its Members' Committee – a group of intelligent, dedicated ladies who render most valuable service. They contribute serious work to the various departments on a regular basis. Their Ten-to-One Talks are increasing in popularity and meet a genuine demand. They act as gracious, informed hostesses at official functions, sell tickets and help with membership

promotions. In fact they have become an integral part of the life of this great Museum, which is as it should be. In serving this institution they have an elite position in the community and their dedication is a measure of their appreciation of this position.

To meet the increasing demands made on them the Committee is expanding to its present total of fifty-eight active and thirteen sustaining members. It is gratifying to see that the new recruits are of the same high standard of intelligence and enthusiasm as the original members.

As Director, whose task is one of endless fund-raising, it was most heartening to see the Committee take over the responsibility for raising the money to purchase a *Protoceratops* and egg for the Dinosaur Gallery. This became a centennial gift from the boys and girls of Ontario who raised the \$1,500 necessary

MUSEUM
ATTENDANCE
1967-68

	NO. OF VISITORS	TOTAL
I. Main Building		
<i>A. Visitors</i>	597,654	597,654
<i>B. School Classes</i>		
1. From Metropolitan Toronto	58,998	
2. Provincial Classes	39,964	
3. Unconducted Classes	50,142	149,104
<i>C. Other Groups</i>		
1. Ontario College of Art	20,072	
2. University of Toronto	15,927	
3. Extension Courses	2,141	
4. Miscellaneous	19,039	57,179
<i>D. Other Uses</i>		
Lectures, Openings, etc.	7,831	7,831
<i>E. Rentals</i>	3,950	3,950
Total Main Building		815,718
II. Sigmund Samuel Canadiana Gallery		
<i>A. Visitors</i>		16,483
<i>B. School Classes</i>		2,903
<i>C. Other Groups & Other Uses</i>		1,153
Total Canadiana Gallery		20,539
Grand Total		836,257

	1966/67	1967/68
Attendance	743,100	836,257
Increase for 1967/68		93,157

for its purchase. The Museum is also grateful to the Committee for a pair of Caughley blue-and-white serving dishes given in memory of Kathy Wise and a Pennsylvania Dutch birth certificate of Waterloo County, given in memory of Trish Barrett.

The ROM is such a large, diverse and complex organization that there is room for all abilities and enthusiasms. We are most encouraged that the Committee has raised its sights and is responding to the many challenges of this exciting, changing society.

As Director, I welcome any initiative they make take and look forward to their full participation in any of our many activities which may appeal to them. Our congratulations to the Chairman, Nancy Holland, and her splendid supporters for their good work in one of Canada's outstanding causes.

*A. Bøgh Andersen,
Danish ambassador
to Canada,
Peter C. Swann,
and Peder Pedersen
of Georg Jensen
Limited admire
silver cup, from an
1918 design by
Georg Jensen,
resented to the ROM
on the occasion of
the Jensen Silver
exhibition*



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ONTARIO
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